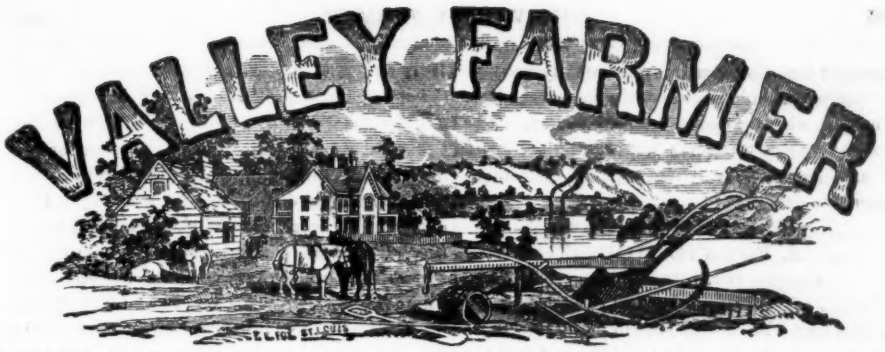

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97 Chesnut street, St. Louis, Mo.

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The Wheat Midge and its Parasitic Enemy.

It is an important fact that most insects that are found injurious to our fruits and farm crops are not only consumed in immense numbers by birds of various kinds, but each has its particular parasitic enemy. If this were not the case, these pests of the farm would become so numerous that most crops would be swept from the land and broad-spread famine would be the consequence. It is one of the wise provisions of Nature that one class of animals and insects prey upon another class, and thus they are kept in check.

A year or two since, Dr. Asa Fitch, the entomologist of the New York State Agricultural Society, in remarking upon that minute, though destructive insect, the wheat midge, stated that in Europe, where the midge has been known for ages, a small ichneumon fly accompanies the midge when it comes forth in its season; feeds upon it, and thus it has been far less destructive to the wheat crop of that country than it has to ours, though its introduction to this country is of comparatively recent date. For many years the farmers in New York have almost or quite discontinued the cultivation of wheat, so destructive has this insect become. Efforts have been made by Dr. Fitch and others to import from Europe the insect enemy of the midge, and promises have been made by the entomologists, of Europe to aid in securing and forwarding these parasites, but thus far we have not heard of the success of the enterprise.

In a late number of the *Rural New Yorker*, we notice a letter from Mr. C. Allen, of Wheatland, N. Y. in which he states that for several days about the middle of June last he noticed in his wheat fields a great number of insects preying upon the wheat midge, which he supposed to be the ichneumon fly that belongs to this insect. Soon after these insects were discovered the midge nearly or quite disappeared from the wheat fields. He describes them as resembling somewhat the pea bug, though with nippers like those of the ant.

If Mr. Allen is correct in his conjectures respecting this matter, it will prove a great blessing to the farmers of this country. But the question suggested, is, How came this insect here? The midge has been a depredator in the United States for more than twenty-five years, and has spread over thousands of miles of territory. It is a question, however, equally mysterious how the midge came among us. It undoubtedly is the order of things that where an enemy so formidable as the wheat midge makes its appearance that its destroyer will soon follow, but the ways and means are not always so clear.

Should Mr. Allen, however, prove correct in his conjectures in regard to the character of the

insect he has discovered, it may readily account for the remarkable success of the farmers of New York in wheat growing the past season. The present crop is unusually heavy, and the grain of excellent quality. We hope to hear more upon this subject.

A POTATO HOUSE.

STORING POTATOES AND APPLES.

Dr. T., of Jefferson county, Ky. has requested us to inform him how he should proceed to build a house suitable for storing potatoes. It is high time that the primitive manner of burying potatoes in heaps in the ground was abandoned, and some improved plan adopted more in accordance with the progress of the age. Potatoes that have been piled up in masses and covered with earth through the winter are unfit to eat in the spring. Stored in this way they generate heat which causes them to vegetate and changes the chemical condition of the tubers, and besides this they absorb a considerable quantity of moisture; and, hence, for the table or for any other purpose they are of but little value, except to feed to farm stock.

When the country was new and farmers were obliged to be content with a cabin for a dwelling, potatoes might, for the time, be stored in the ground; but now there are but few farmers who cannot build a suitable potato house. Where an abundance of cellar room is at command, potatoes may generally be well kept without the labor of building a house especially for that purpose; yet it is not pleasant to have them stored in large quantities in the cellar of the dwelling.

The size of a potato house must be governed by the quantity expected for storage. Sixteen feet square, for ordinary purposes, makes a convenient size. The outside walls should be either of logs, stone or brick. When timber is convenient, we should prefer logs, not less than eight inches thick. The more compact they are laid up the better. The spaces between the logs should be well filled in and closely plastered. Around the inside a row of studs should be placed twelve inches from the wall and planked up. The space between the wall and the lining should be filled with cut straw, old tan-bark, or charcoal. Upon the joist overhead a floor should be laid, and upon this a covering of tan-bark should also be laid, say six inches thick. A wooden chimney or ventilator eight or ten inches square should extend from the room through the roof or out at the gable end. Bins or shelves should be made in each side of a center passage. It is well not to have the potatoes more than three feet deep in the bins. If this does not afford room enough to store the crop, a similar tier of bins may be made above the one on the floor. A double door should be provided, and one of them lined so as to shut out the frost in extreme cold weather. With a house thus arranged, and the potatoes dried before they are stored, they will remain good, dry and sound till June. They are always acceptable either for use or for market, and at times when it would be inconvenient to take them from pits in winter. It is as important to preserve potatoes well for seed as it is for the table. Potatoes stored in pits during the winter usually part with much of their vital or vegetating power by being heated, which causes premature vegetation. These sprouts are usually lost, and the second growth, of course, can never be equal in strength and vigor to the first growth. A house thus constructed is not subject to the fluctuations of temperature of the external air; always cool, and yet the temperature never falling to the freezing point.

A house similarly constructed is the best place for the storage of apples. Apples will resist several degrees more cold than potatoes. A temperature of 30 degrees or even lower for a short time would not injure apples. The nearer the freezing point apples are kept the better. But apples before being stored should be allowed to remain in piles in the orchard, sheltered from the rain and dews, with a covering of boards, and after they have passed through the ordinary sweating they may be stored. If stored in an ordinary cellar they would keep better if carefully packed in barrels and laid up where they can remain dry. If apples are expected to keep well they must be carefully hand picked, and all inferior and unsound apples removed.

VEGETABLE CURIOSITY.—There is now growing in Dr. Hepburn's garden, Mokelumne Hill, California, a cabbage tree which, for five years, from an ordinary cabbage plant, has grown to be some nine feet high in the main stock, and when its full branches were on a month ago, near fifteen feet high. The stalk has become hard as wood, and it bore this year about fifty or sixty heads of cabbage. The Doctor intends to keep it growing, and thinks that in a few years more he will be able to boast the possession of the most profitable tree in the country; for besides great quantities of green cabbage and krout that it produces, he gathers many papers of seed, and hundreds of plants that spring up spontaneously beneath its boughs. So says the St. Andreas *Independent*.

AGRICULTURAL SCHOOLS.

A convention of the friends of practical, and especially agricultural education, was held a short time since at Bloomington, Illinois, with the view to the establishment of an Agricultural Seminary in that State. It appears that Mr. C. T. Chase, of Chicago, has been employed to visit the various Agricultural Schools and Colleges in the United States. His report upon the subject we find in the *Chicago Tribune*, but we can hardly find spare room for a copy of it. During the meeting, Mr. Chesney, a gentleman deeply interested in Agricultural education, &c. was called upon by motion for information, who stated among other things that an enterprise was about to be inaugurated in the city of Chicago, for an Agricultural College, in connection with the University of Chicago, which he wished to mention that the Convention might know what had already been done; and to prevent any misapprehension as to his own motives, he would also state that he had the offer of a position in the University which he would probably accept, and that while the Professorship tendered him was in another part of the institution, he would be expected to take some humble part in the management of the Agricultural Department. The institution has a commodious building completed, six professorships are already filled, a liberal endowment, and will soon start an experimental farm at a convenient distance from the city. Good soils of several varieties can be secured at several points that are under consideration. The farm will be under the management of the best Agricultural tutors of the country; professorships appropriate to an Agricultural College of the very highest order, and students received next fall.

We are pleased to see Agricultural Schools multiplying, and particularly in the West. But before these schools can fully succeed and meet the expectation of their founders, the young men of the country must be *taught to know* that labor is not only honorable and respectable, and none more so than agriculture; but they must also be taught to know that without *physical exercise*, such as that afforded on the farm, health and life cannot be sustained to half the period allotted to man. It is the false and ridiculous notion that has too long prevailed that labor is degrading, that has been in the way of the perfect success of some of the manual labor and agricultural schools heretofore established. These false notions, we are glad to say, are gradually giving way to more correct views in regard to the importance of physical as well as mental labor and education. It is the overcrowding of the professions, so called, that has led to so many instances of fraud and crime that we daily hear of among this class of citizens. The profession of Agriculture is the most honorable, the most healthful, and the most sure of its reward, while it is the most free from temptation to vice and immorality. Let these facts be impressed upon the minds of the youth of the nation from infancy, and Agriculture and Agricultural Schools cannot fail to prosper.

Diminution of the Fall of Rain.

The *Homestead*, in commenting upon the well known fact of the annual diminution of the fall of rain in the British Isles and in this country, alludes to the fact that the Scottish Meteorological Society offers a reward of £20 (nearly $100), for the best essay on the following questions: "1. Whether the amount of rainfall in the Western part of Europe, and particularly in Scotland, is less now than it formerly was. 2. Assuming this fact to be established, what are the most probable causes of it?"

With reference to the first of these questions, the Secretary of the Society, A. Keith Johnson, says:

"Notice may be taken of the popular belief that springs of water have been gradually diminishing, or altogether drying up, especially in our arable districts; and the following statement in the report of the Registrar-General for England, in the quarter ending June, 1859:—'The deficiency of the fall of rain from the beginning of the year is 1¾ inches. The deficiency in the years 1854, 1855, 1856, 1857 and 1858, amounted to the average fall of one year, viz., 24 inches. From a careful examination of the fall of rain (year by year) from the year 1815, it would seem that the annual fall is becoming smaller, and that there is but little probability that the deficiency will be made up by excess in future years.' With reference to the second question, notice may be taken of the supposed effects of deep drainage and deep culture of the soil in raising the temperature both of soil and atmosphere, in lessening evaporation, and diminishing the condensation of vapor."

The *Homestead* also alludes to our remarks on this subject in the July number of the *Valley Farmer*, and says:

"Whether it is a periodical fluctuation extending through many years, or an actual permanent diminution, is not clear. It has been confidently attributed to the cutting off of the forests, and the conversion of wood-land into field and meadow. How this affects the rainfall, except as it gives the winds freer sweep and the showers pass more rapidly, we cannot see."

It appears to us that a clear understanding of the natural laws that produce and govern the fall of rain will readily explain the diminution

of the fall consequent on the removal of the forests of a country. That there is any real diminution in the quantity of the rainfall over the *entire surface of the globe* we are not prepared to admit—unless from the single cause alluded to and quoted above from Secretary Johnson, viz:—*The supposed effects of deep drainage and deep culture of the soil in raising the temperature both of soil and atmosphere, in lessening evaporation, and diminishing the condensation of vapor.* It is an important fact that every farmer should know (especially in view of the question under consideration), that drainage and deep and constant culture insures a supply of moisture to the growing crops, in a dry time, that is not available to similar crops growing on undrained land, and plowed in the shallow manner as practiced by our fathers. Whether this results in part from the 'raising of the temperature both of soil and atmosphere, and lessening evaporation, and diminishing the condensation of vapor,' as suggested, or whether the moisture is supplied in full from the earth below by *capillary attraction* in consequence of the favorable condition in which the particles of earth are placed by drainage and the thorough pulverization the soil has received, we will not here attempt to decide. The fact we know to exist, which is a sufficient argument in favor of deep and thorough culture in view of the severe droughts which of late years so frequently occur.

But we took up the subject chiefly to remark upon the influence consequent upon the removal of forests in diminishing the amount of the fall of rain.

If we understand the laws which cause the rain, it is the sudden lowering of the temperature of the atmosphere, when filled with vapor, consequent upon its passage over some terrestrial object, like a forest, a mountain or the sea, which necessarily produces this result, reducing the floating vapor to drops of water, which descend to the earth in the form of rain. On the other hand, for instance, the wind, in its passage in the summer season over our vast prairie region meets with no intervening medium calculated to produce this result, and the consequence is the prevalence of extreme drought such as threaten some portions of that beautiful region at the present time with famine. The air thus passes on and on until it meets with some more diversified country calculated to affect the temperature, when the accumulated vapor is condensed and clouds are formed and readily pour forth their showers upon the thirsty earth.

If the removal of forests diminish the fall of rain, which we assume as a fact, the planting and cultivation of trees upon the naked prairies must necessarily tend to reduce the evils of drought which cause so much disappointment and suffering in that country; and while it contributes to this favorable end, it will at the same time furnish a supply of fuel and timber for fencing and architectural purposes, to a large population who labor to great disadvantage for the want of it.

Seeds and Cuttings from the U. S. Patent Office.

It is probably known to the most of our readers that in addition to the supply of seeds received at and sent off from the Patent Office, there is also in the City of Washington several acres of land and a number of Green and Hot Houses devoted to the propagation and culture of numerous kinds of rare trees, vines and plants, both native and exotic. Among these are a great number of tea plants, from seeds obtained by Mr. Fortune, of the London Horticultural Society's Gardens, who was employed to go to China for them. Recently a fine assortment of seeds and cuttings have been received from Syria. They were collected by the Rev. Dr. Barclay, Missionary now in that country, who it seems has taken special care to procure every valuable variety within his reach for the American Government, and has obtained them at the moderate price of $1,000. The cuttings, &c. will be sent to the propagating houses in Washington, and when established will be distributed among the various friends of horticulture in the United States. Among the cuttings, &c. are a variety of grapes, olives, and various other fruits; in the list of seeds several varieties of wheat, barley, various vegetable seeds and useful plants. The seeds will be sent out during the coming fall and winter. Among the interesting plants is the Lessaban, from which, it is said, the crown of thorns that was placed on the brow of the Savior was plaited. The plant is not only very ornamental, but makes excellent hedges. There are also seeds of melons, squashes, camel's food, dates, walnuts of superior quality, that will prove, we hope, valuable acquisitions to the South and West. The seeds of the Mais tree, from which it is said a valuable medicine is obtained. The seeds of this tree were from the inclosure of Solomon's Temple.

The next report from the Patent Office will contain more minute and valuable directions for the propagation of the various seeds and plants

to be sent out. We hope that this department of our central government will in future prove of far greater value and importance to the country at large than it has heretofore done under the supervision of the distinguished J. D. B.

Transplanting Large Trees.

As refinement and cultivated taste advances, it manifests itself in various improvements around the homestead, and where the reckless woodsman has despoiled every shrub and tree that might cast its cooling shade over our dwellings, or where nature has withheld them, there is now a growing disposition to plant trees, and the desire is to plant such as will be readily available by choosing those kinds of rapid growth or by transplanting large trees, in order that their benefits may be at once available.

We have seen trees transplanted successfully that were eight, ten or fifteen inches in diameter; and in the Boston Common, a few years ago, Elms were reset that had attained the size of a barrel and even much larger. In Europe the practice of removing very large trees into private lawns has become very common. A Paris correspondent of the *Boston Traveler* alludes to a work of this kind that he witnessed daily at the Champs Elysees, which are set in the place of those that through great age have commenced to decay. He says it is a strange sight to see trees fifty or sixty feet high, with a trunk two feet (!) in diameter, in full foliage, moving up through the Boulevards on wheels. So remarkable did this work appear that he was led to witness the whole process of removal and planting, which is done as follows: A circle is cut round the tree about three feet from the trunk and at a depth of five feet, through the roots and earth. The earth which adheres to the roots is covered and bound with brush and ropes, to keep all together, then large chains are passed under the whole, and the ends brought up above the surface of the ground. It now being ready to be removed, two heavy, strong planks are laid down outside of the hole to receive the wheels of the wagon, which is made of solid iron, and a skeleton body of only two heavy side pieces, which connect the fore and after wheels; the front wheels having an axle-tree passing from one side to the other, while the rear wheels are hung like those upon many railroad cars, having one open space, and strengthened by heavy cross-pieces of iron, which can be removed at pleasure. Over each wheel is a windlass to hoist by a crank. Now, being ready to take up the tree, the heavy cross-piece behind is removed, and the vehicle is backed upon the planks, and the trunk of the tree now stands up through the middle of the skeleton body; the ends of the chains are made fast to the windlass, and eight strong men, two at each crank, wind up the chain and swing the tree, roots and earth to the wagon, put in the cross-piece behind, attach from four to six horses, and drive off. The tree is lowered into the earth in the same manner that it is taken out.

The same process may be performed equally successful and perhaps with less cost by making all the necessary preparations during the open weather in winter by removing the earth, leaving as many roots as can be removed, with the earth entire adhering to them in the form of a ball, and with the wagon and fixtures described above the work may be done in the most successful and perfect manner. In any case the branches of the top should be thinned out and shortened to an extent corresponding with the loss of the roots.

In the Central Park, New York, we noticed considerable numbers of large elms and other trees that were brought a distance of thirty miles, and hardly a tree failed to grow.

[Written for the Valley Farmer.]

Stirring the Soil in Drought.

Never have we had better opportunities of observing the highly beneficial effects of frequent and deep stirring of the soil, in drought (combined with good preparation), than during the present remarkably dry season.

We know that this is a hackneyed subject; yet, at the risk of being tedious, and being voted a bore, we cannot refrain from recounting our experience; for, in our opinion, it is a subject that will bear repeating again and again; until every cultivator of the soil throughout the length and breadth of the land, shall not only believe in, but practice it.

In this vicinity, not only the summer has been dry, but the winter and spring preceding were very dry. Little rain has fallen for over a year, and the sub-soil has never been thoroughly saturated, since it got dry last summer and fall. Consequently the fountain of the supply of moisture has been illy supplied, and we have had only the occasional showers that have fallen from above, and the moisture that has welled up from the depths below. Which of these two has had the most influence in supplying the soil with moisture and sustaining the lives of plants, we are not prepared to say. Certain it is, that the cultivator can aid both of these processes, to the decided advantage of the growing crops, by keeping the surface of the soil well stirred, leaving it at all times open and mellow, ready to absorb every drop of rain that falls on it, and to receive into its bosom the moisture that the

atmosphere carries with it, even in its dryest state. These are some of the advantages that follow the practice recommended, but not all.

There are two ways by which the soil is deprived of its moisture, going on at all times:—One is the gradual settling away of the moisture into the bowels of the earth, into the rocks and fissures, to be thrown out on the surface again at a lower level, in the shape of springs; and the other is, the rising of the moisture to the surface whence it is evaporated, and carried up by the atmosphere to be precipitated again, somewhere, in the form of rain. Though we do not suppose that the process of the absorption of moisture from the soil, and *vice versa* can be going on at the same time, yet we think it probable that it is going on one way at night, and the other during the day. We do not, however, put these theories forward as the true scientific explanation of the matter, but leave those skilled in these things to do that. We only know the results that follow a certain practice; and we attach equally as much importance to the belief, that the surface soil when in a proper condition will arrest and retain around the roots of plants, to be appropriated by them, the moisture that rises from below, as we do to that which descends from above, either by dews or other atmospheric influence.

It must have been noticed by every one, that soil that has been kept frequently stirred—while the immediate surface is dry and fine, like dust—a few inches below it is quite moist. The surface is dried out, from the immediate action of the Sun's rays causing absorption, and we have no doubt but the moisture present next the surface, is due to that which rises from the sub-soils below, and that it is held there, as in a sponge, and so intimately commingled with the particles of soil, that it takes a long time to pass out. If a bed of soil two feet deep, were all broken up into the finest particles and rendered porous and permeable to air and water, it would retain the moisture a proportionally longer time than the upper six inches—which is as much as is usually acted upon by the cultivator or plow.

This, then, is the secret—good preparation and frequent cultivation afterwards, especially in dry weather—putting the soil in such a condition as to be in the best possible state to receive every good that may descend from above, whether in the form of rain, dews, or a moisture-laden atmosphere, or to retain that which rises up from below, and possibly to draw up by capillary attraction, what would otherwise descend.

If the above is the correct view of the case, it will readily be seen what immense advantage a thorough primary preparation of the soil, for a crop, will give. For instance, if a piece of ground is plowed say eighteen inches deep, and then that which is on the surface harrowed, and rolled, and otherwise manipulated, until it is well pulverized; then, if it could be completely inverted and treated in the same way, the process might be repeated as many times as you choose, without injury, but say it was done three times, if it could be thoroughly done, the whole would be a bed, as above described eighteen inches deep, that with after cultivation would give the crop as good a chance to withstand the effects of drought, as it could have.

Partial experiments similar to the above have been pursued by us in our ordinary cultivation this season. And we can only say that numerous persons can testify to the luxuriant and splendid growth, of everything it has been applied to. We have ourselves been surprised at the effects of such cultivation. Trees have kept up a healthy, rapid growth, through all the heat and drought. Seedlings, stocks and everything that started with a spark of vitality in them, have grown luxuriantly. Cabbage plants that were set out in ground prepared somewhat after the above plan came with the loss of the fewest plants possible, and grew off with a vigor that was surprising, and never flagged a leaf in the dryest and hottest weather. These are facts which speak for themselves, and which every one who does not believe in, can prove, if he will only try it; and disbelievers or doubters we challenge to the trial, knowing well it will accrue to the advantage of every one who begins the practice for the first time. Carew Sanders.

THE SHIFTLESS FARMER.

Eds. Valley Farmer: — Who has seen a shiftless farmer? Or rather who has not seen one? He is to be found in almost every neighborhood; but find him where you will he is the same slip-shod and go-easy land-lubber—the same miserable apology for a farmer. As a man he looks much like other men, save that he has a sort of "seedy," run-down look; a tame, indifferent expression; a logy, lazy, ambling gait; a sort of draggling movement like a snake with his back broke; a drawling, sleepy speech. But he is seen most in his farm and home. His fields have a sort of bare, half-common, half grave-like expression, bushy, weedy, worn, as though a plague had come over them. His fences are mere cattle-frights, stock-traps, picket guards to say to the cattle, "you are expected to come no further." But they leave it to the sense of duty in the stock to cross them or not. If an ox, cow or horse looks over into a corn field, and longs for the good food there, and then checks the impulse to go over by sage reflections on the harvest, the corn is saved by the wisdom of the animal, not by the strength of the fence. As to gates, he has none; bars he once intended to have, but every post is split, the bars are broken, and a kind of toggle-up, half-fence and half-bars, has taken the place. He attempted to build a barn, but he never finished it. The doors are not hung, nothing is done to the inside, the stables are horse-prisons, the whole thing is a failure. He has always been talking about some sheds, but he has not got them made yet. His fields and roads are his only yards. He has yards in his mind but he has never got time to fence them. He has a garden plowed off of one corner of the nearest field. A few fruit trees are about it, grown up, alone without let or hindrance, a wide margin of grass, weeds and vines surround it. He be-

gan an orchard some years ago. Some of the trees have grown like wild thorn trees; some have died; some have had their branches split down. They have all served the good purpose of rubbing-posts for the stock. Not a tree has been put in since the first setting. It is a scraggly affair now. He calls fruit raising a humbug. Manure he does not have; it is scattered where his cattle roam. His cows can outrun all the dogs in the neighborhood, and are so skilful at climbing that they can well-nigh walk over a rail fence. They are milked when they come home, and are fed when they can get nothing to eat themselves. His hogs are of the shark breed, grand rooters and racers. He has tried to improve the stock several times, but they all fall back into the shark breed after a few years. He has a house, he calls it a house; it is the place he lives in. He has a family in it. His wife looks like the last rose of summer, and his children like neglected paupers. The windows are look-outs, papered, pasted and shattered; the doors creaking; gates, latchless, loose, rattling. His cellar is a hole in the ground, cold, damp and stenchy. His wood-house is a muddy space of ground back of his house, where he cuts his wood a few sticks at a time as it is wanted. His larder is a corner of the garret where rats, cats and vermin riot in luxury. His granary is an open space in one side of his barn, visited at will by hens, ducks, rats and small pigs. His tool house is wherever his tools happen to be. Sometimes he gets a plow into the barn, but oftener leaves it in the open air. He plows often with one horse, rooting feebly the surface of the soil. He thinks it is labor lost to plow deep. He sows his grain broadcast and harrows it once over. He harvests it late—what the cattle don't get—and threshes it as he needs it. He goes to mill with a bushel at a time, often on horseback. He borrows much of his neighbor and returns but little. He can't spare his children to go to school, his work is so pressing. He is behind the time in sowing, tending and harvesting. He never drives his work; his work always drives him. He loves to talk with a neighbor and tell many long stories. He would like to read, but he never gets any time. He would take a paper, if he could only spare time to read it; but as he cannot it is useless to take it. He would join the farmers' library association, but he can't afford the money or time. He wants many books of which he has heard, but they cost too much and he is too busy to read them. He can afford to be ignorant and shiftless, but is too poor to invest anything in knowledge or personal improvement. He seems to think that ignorance pays well, while wisdom is an expensive luxury. Such farmers are too plenty. They are hard-working, honest, good-hearted men, who mean better than they do. They lack two essential qualities of success, agricultural information and energy. They have need to take a good paper and join a wide-awake farmers' club. W.

When a river does not make a noise it is either empty or very full.

[Written for the Valley Farmer.]

SNAKE BITES—REMEDIES.

I find upon inquiry, that the most reliable remedies for the cure of Hydrophobia and the bite of venomous reptiles, are similar. The virus in both cases seems to be *prussic acid*, and the most effectual neutralizer of this is the *volatile alkali* of Ammonia. The cure rests in the neutralization of the poison until the *vis naturæ* can react upon the system, and eject it through the healthy operations of the natural functions of the body. To arrest the action of poison, the remedy should be prompt in its effect. This is the characteristic of Ammonia.

A correspondent to the *New York Tribune*, on reading the account of the death of Purnell Jackson, of Maryland, from the bite of a copper snake, says: "In nearly all parts of the country, where venomous snakes are known, there can be found persons who can cure their poisons. I will not detail these various curatives, but will give a perfect cure for the poisons of all venomous reptiles and insects, first giving the reasons why the remedy I shall mention is an unfailing curative. From years of investigation and inquiry I am quite positive that the poisonous principle in the virus of all snakes, &c., is prussic acid—somewhat modified, no doubt, but so essentially identical with it, that what will neutralize this acid is an antidote to the poison. This antidote is the *volatile alkali of Ammonia*."

This is found in the shops under various names—*Volatile Salts*, used in ladies' smelling bottles, *Aqua Ammonia* and *Spirits of Ammonia*.

The writer continues: "As soon as possible after the bite, apply a few drops of the *Aqua Ammonia* to the wound, and put twenty drops in a little water, or whisky and water, if you please, and drink it. Take this dose every ten to thirty minutes, until there is free perspiration, and all symptoms of poison disappear." * * * * "This antidote is perfect and unfailing." The writer recommends the same treatment for the bite of mad dogs. "I should at once fill the wound (bite of a mad dog) with the strong Aqua Ammonia, and keep the wound discharging with it for some weeks, at the same time giving it internally, so as to thoroughly impregnate the system with it for some time."

Dr. Charles L. Barnett, an intelligent and experienced physician, of Montgomery county, Virginia, relates the following case, which is but one of many happening in his practice:

"*Case.*—A young lady and delicate female, aged eighteen, residing in the mountainous regions of Virginia, went out with a party of friends after berries. Finding the ground very slippery, they put off their shoes. Arrived at the top of the mountain, she separated from her companions, and was soon after bitten by a rattlesnake on the foot. After walking a few steps, and beginning to suffer great pain, she sat down to apply a ligature below the knee, and found herself unable to rise. Her comrades, hearing her cries, came to her assistance, and while one of them was sent for me, the others prepared a litter to carry her home. My residence was distant twelve miles. On returning with the messenger, I met the company at the foot of the

mountain, one mile from the young lady's home. The patient was perfectly blind and speechless; all voluntary motion gone; not the slightest ability to move a finger or toe; eyes thoroughly bloodshot, weeping bloody water; a bloody fluid issuing from the ears; gums bleeding; tongue, not much swollen, but hanging one and a half inch out of the mouth, and blood froth issuing from the throat.

"*Treatment*—Mixing fifteen or twenty drops of the *Volatile Spirits of Ammonia* in a gill of water, I poured it little by little down her throat, the difficulty of swallowing being of course very great. This was continued in small doses from half-past one o'clock, P. M. until ten at night, when she was able to swallow freely, and had regained her sight and senses. She was then directed to take fifteen drops in water every two hours until six o'clock next morning. From that time I ordered twenty drops of the remedy to be taken three or four times a-day for fifteen days, and the bathing of the foot, which was black and much swollen, three times daily in the ammonia diluted. Under this treatment she was radically cured."

I know a case which happened to a boy living near Frederick, in Maryland. He was bitten on the ankle by a copperhead. The whole leg, in a few minutes, was swollen almost beyond credibility. This case was cured effectually by the application of *Indigo* and *Whiskey* to the affected part, and by the patient drinking freely of hog's lard.

But the Rum or Whisky treatment has its warm advocates. I will content myself with but one authority—Dr. T. A. Achison. An account of the case I shall allude to, can be found in the *Southern Medical Journal*:—

Dr. A. "found the young lady almost moribound, pulse wavy and scarcely perceptible, face swollen with a besotted expression, and mind wandering, the pupils of her eyes dilated and unable to see.

She declared it was dark, which was not the case. She also fancied it was raining, though it was calm and clear."—The bite was upon the foot, and by "a deadly reptile."

Treatment:—Half a wineglass of whiskey for the first dose. The patient was placed in a warm salt-bath—the wound cupped—and twenty grains of the *Carbonate of Ammonia* given. This was immediately thrown up with the contents of the stomach, which were of grass-green color. Whisky was again freely given every half-hour alternating with twenty grains of the Carbonate of Ammonia, until three pints of whisky and eighty grains of the Carbonate had been taken —and no symptoms of intoxication followed. This treatment resulted in a perfect cure.

These cases are selected from quite a list now by me, to represent the two modes of treatment and cure. My own preference inclines to the treatment of the case related by Dr. Barnett; but the Whiskey cure is reliable, and most convenient for the people in general. The whisky should be given without regard to its intoxicating properties, and as soon as possible.

The poison of the snake acts on the system as a powerful opiate, and the alcohol of the whisky counteracts this by its stimulating effect. This is the secret of the curative properties of whisky in such cases. N. M. Harding.

[Written for the Valley Farmer.]

LETTERS TO YOUNG FARMERS.

NUMBER SIX.

Young Men of the Farm: These are fast times, and they are prolific of fast men. Most young men seem to have a strong proclivity to fastness. They often carry more sail than ballast; more steam than breakage. The fast line is the popular one. The fast horse wins the prize. The fast merchant draws the customers; the fast man secures the gaze of the eager public. And the young farmer imagines he must catch the spirit of the times and be fast as the fastest. He must have a farm as large as his father had in his old age; must live in a better house than his parents ever thought they needed; he must drive a better horse; ride in a better carriage; sport a finer watch; live in a more fashionable style; play the gentleman at more expense; cut larger swells; speak louder, and be known further than his old fogy ancestors ever dared to dream of. He has no idea of getting rich by the little; he is bound to have a pile all at once. He is not going to bring up lambs by hand, sell turnips at a bit a bushel, carry chickens to market, wear home-made clothes, wagon cordwood through the mud, and cart potatoes round like a Yankee peddler. Not he. Talk to him about a quarter section! He wants a thousand acres. Intimate that he is ever going to fail! Why he can prove by actual experiment and mathematics that an acre will produce five dollars net profit—a thousand acres five thousand dollars. He can afford to be fast on that. He don't understand his business! Why he is sure that he knows a thousand things that would astonish his father. Experience! To be sure he has not had it himself, but he knows who has and what it is. Of course he is safe—has a through ticket to Fortune on the Express, Double-Quick-Time. This is the feeling of many young men. They want to start, not at the bottom but at the top of the hill. This slow climbing up, step by step! they don't believe in that! This working and waiting! They are going to do none of that. They are willing to work, but they are not going to wait. They want to reverse the order of the seasons and reap in the spring. They would like to reap just before they sow, so as to sow money instead of seed. The old way of beginning with a small farm and a few tools and working up by slow degrees, is not consistent with their notions of the dignity of agriculture. This starting in a cabin, and building one room at a time, as the family, farm and purse enlarges, is all gammon to them.

Now this is just the point we believe young men have need to be set right on. Instead of beginning with much they ought to begin with little. Instead of a large farm they ought to have only a small one. Their experience is small; their judgment is weak; and their wants ought to be few. And beginning with a few

acres they will soon learn how to proceed to insure the best results.

"Large streams from little fountains flow;
Tall oaks from little acorns grow."

Some educators try to make us believe there is some royal road to learning by which dunces can take a short cut to the old college honors. But this is all false. It is a sham got up to cheat fools. There is but one road to learning and that is the hard, old up-hill way of severe study and long, close application. True, there are many appliances now that the old scholars did not have, many helps and short methods to particular things. But the old way beaten by ten thousand weary feet is the only way after all. Much the same way is it with the life of the farmer. He must begin in youth with acres bearing some proper relation to his experience and his actual knowledge. Let him buy a few acres, build a small house, secure a little stock, and such implements as he must have and begin in a small way. Let him raise his own seed, plant his own nursery, increase his herds and cattle by natural generation, and not by purchase. Let his own skill and industry supply his own wants as far as possible. As he adds acres to his farm, and rooms to his house, and length and breadth to his barn, and numbers to his cattle, horses and herds, and comforts to his home, and weight to his character and purse, he will feel a just pride in the thought that all this is the result of his own skill and industry. He will learn how to keep and improve what he gets and to add more and still more to his possessions. He will feel that he is himself a living power capable of producing the means of comfort and wealth. He will be counted as a growing man. And a growing man is a man always in the favor of his fellows. When a man is going up every body is glad to lend him a helping hand. All who know him volunteer to do him service. But when he is going down, all step forward to kick him along. Every one accelerates his downward course. It is always best therefore to start at the bottom of the hill and work steadily up. Better be small and rising a little, than great and falling a little. The true course for every young man in every business is to begin at the alphabet of his business, and rise as fast as he can safely and honorably. *

[Written for the Valley Farmer.]

How to Save Sweet Potatoes.—We have tried to, but always failed, because we have no house to keep them in a proper temperature. The other day while sitting at dinner in company with three gentlemen, the conversation turned on sweet potato keeping, and the following was the plan recommended: Take boxes 3x4 feet and put 3 inches of dried oak leaves on the bottom, then one layer of potatoes alternating till the box is filled within 6 inches of the top, and that six inches must be packed with leaves; and be sure to keep the three inches all round the inside of the box packed tight with leaves; then put the cover on, dig a hole in the ground four inches larger than the box, put two strips in the bottom two inches thick, and then put dry leaves all around it, and on top put enough to make it one foot high; then put on one foot of earth, forming it roof shape. He says he never lost any of his. R. Aiton.

FARMING.

It is natural for man to think every condition of life except his own the happiest and the most exempt from the cares and solicitudes common to the human family. The farmer not unfrequently sighs for the inert life of the professional man. His broad acres and the rich, waving harvests, glittering in the sunshine, the bracing atmosphere of the country, rural scenery, the song of birds and the grateful perfume of spring flowers, fail to satisfy his craving and indefinite longing for something novel or something differenl from the endowments of a liberal and bounful Providence. The lawyer, with bookworms for his companions and dry technicalities for his playthings, sighs for a rural retreat, where the kindly breezes of heaven may come occasionally and his heart once more expand to the delightful influences of congenial Nature. All classes envy the man of leisure, and vainly imagine, were their lots reversed, how happily they could dissipate time in a whirl of giddy pleasures or in the performance of fanciful acts of charity and philanthropy. It is so easy to be liberal with princely wealth that exists only in the fiery coffers of imagination—so easy to enjoy the luxury of doing good—in fancy.

But independently of this common desire for novelty, sound reason seems to designate the farmer's avocation as the best adapted to a large majority of men. In the wise economy of Nature the farmer is the bone and sinew of the world. It is the product of his labor that clothes and feeds the human family. To him they look in the hour of famine and desolation for comfort and relief. In the moment of peaceful prosperity, when the tide of business is unbroken in its successful flow, it is on the tiller of the soil that reliance is placed to sustain the life of trade and give buoyancy to commerce.

If then that avocation is the most honorable which is the most useful and most indispensable to the world, the farmer is the true nobleman of earth. Besides he alone is truly independent. Care and labor never fail to bring him a competency. Work he must, but it is honest and honorable work. No drudging and compromising with the dictates of moral duty as is frequently the barrister's doom—no empiricism and juggling, as is too often the case with the physician—no huckstering for a trivial per cent. as the merchant must do—no duplicity and trickery such as the aspirant makes use of to gain office and its emoluments. The matin song of birds is his morning *reveille*, and as the "Grasshopper chirrups one good night carol more," he gathers around his fire-side, blessed by the kind and contented faces of those who meet him there. Whatever there is of genuine happiness, over which has not passed the "trail of the serpent," gathers around such a home. Contentment is not the highest felicity—it is rather

a negative pleasure, but in the life of the farmer it is blended with active enjoyment.

But let us be understood. It is not every man who can appreciate the pleasures of rural life. In such a life many things are needed to fill up the picture. The pleasures of literature, especially that literature which is fragrant with the aroma of wild flowers and musical with the the babbling of brooks—should lend a pure and never failing source of enjoyment to the lover of the country. But it is a lamentable truth that too many are too poorly qualified to amuse themselves with innocent pleasures such as the farmer should appreciate and enjoy. A man must preserve much of the simplicity of nature about him—he must keep his appetites unperverted, his tastes uncorrupted, and his desires in conformity with the laws of his constitution. To such a man—a man of taste, cultivation and refinement—the life of the farmer presents the ideal condition of existence. Yet, after all, its greatest recommendation is its independency and its labor. "The glorious privilege of being independent" and the consciousness of honestly earning a subsistence and competency, are pleasures inherited wealth can never yield. To the farmer we say then give honor—it is his due. Honest, independent, generous, he leads an enviable life, and when the pleasares of earth are fading from his vision, he will have fewer regrets to mingle in that last panoramic review of the past and its associations.

Preserving Shingles on Roofs.—The following article we copy from the *Rural Intelligencer*, as worthy of attention by those who desire to preserve the roofs of their habitations and buildings:

"Some paint roof shingles after they are laid. This makes them rot sooner than they otherwise would. Some paint the courses as they are laid; this is a great preservative, if each shingle is painted the length of three courses. But about as sure a way to preserve shingles, and that with little or no expense, is a mode recommended to us by Hon. David Hunter, of Clinton, on the 23d of February last. We republish so much of his letter. as relates to this subject, in hopes that it may be of service to many of our readers:

'There is one thing more that nearly all people know, if they would only attend to it; that is, to sprinkle slaked lime on the roofs of their buildings in rainy days. Put it on considerably thick, so as to make the roof look white, and you will never be troubled with moss; and if the shingles are covered ever so thick with moss, by putting the lime on twice, it will take all the moss off, and leave the roof white and clean, and will look almost as well as if it had been painted. It ought to be done once a year, and, in my opinion, the shingles will last almost twice as long as they will to let the roof all grow over to moss. I tried it on the backside of my house ten years ago, when the shingles were all covered over with moss, and they appeared to be nearly rotten. I gave the roof a heavy coat of lime, and have followed it nearly every year since then, and the roof is better now than it was then; and, to all appearance, if I follow my plan, it will last ten or fifteen years longer. The shingles have been on the roof over thirty years. There is no more risk about sparks catching on the roof than on a newly-shingled roof. Those that do not have lime near by, can use good strong wood ashes, and these will answer a very good purpose to the same end.'"

To Destroy Insects in Stored Grain.—Grain is sometimes subject to depredations from the flying weevil or grey moth which develops and matures in the heart of the grain, and which imparts considerable heat to the bulk of the grain. The heat is equal to or above blood heat. Grain infested with this insect is easily detected on thrusting the hand into the body of the grain, by means of the great heat of the mass. Another insect is sometimes found in granaries and in mills that depredate on the stored grain.

In France large quantities of grain are stored up against time of scarcity, and in order to protect it from the depredations of the insects that prey upon it, commissioners have been appointed to examine into the means of destroying them, who have reported that a small quantity of cholorform or sulphuret of carbon put into the interior of the grain pit (which is usually in the ground) and then hermetically sealed up, will destroy all the pests. About 75 grains of sulphuret of carbon are sufficient for about four bushels. Grain put up in rail pens, as is the custom in the West, may be treated with equal success with this agent by covering the heap with a tarpaulin or close woven cloth.

How to Shock Corn.—Get a piece of thick plank, 6 by 15 inches long; bore an inch-augur hole in each end, and a three inch hole in the centre. Tie the plow-line fast in one end: then make a grind-stone crank with an axle 3½ feet long—sharpen one end of the crank. All told. Place this plank against the shock at the proper place to tie the shock: the second boy will run round with the rope—put it through the hole in the other end of the plank—hitch to the axle and wind up tight and tie with a corn stalk—all done in five minutes—with rope and crank on to the next. A shock put up sixteen hills square, around 4 hills, tied at the top in this way never fails, and tied very tight, it keeps rain out most effectually.

After seeing this plan adopted—as it ought to be—any man who will then set up stalks with cross sticks ought to be taken care of. This is the New York plan. Cornplanter.

La Guardo, August 8.

In literature and in love we generally begin in bad taste. By experience and observation we become sensible to the charms of the simple and unaffected, both in belles and belles lettres.

HEDGES.

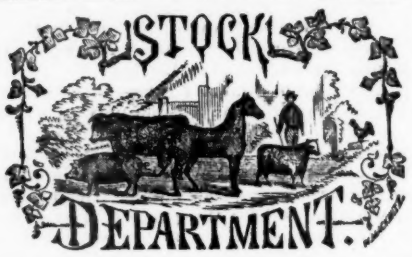
The difficulty in keeping the branches of the Osage Orange sufficiently near the ground "to turn" swine, has been the greatest, and perhaps only objection against its general use in displacing plank and rail fencing with hedges; but we are gratified in being able to announce that that objection can be satisfactorily overcome, by a simple and easy process, which scarcely adds to the labor of cultivation according to the ordinary method. Mr. B. A. Alderson, of this county, whose name is familiar to the scientific agriculturists of the county, as a persevering experimenter in testing the relative merits of asserted improvements in agriculture, is entitled to the credit of having removed this great and serious objection to the general use of hedges. We are not announcing an untested theory, but an ascertained fact, which has been thoroughly tried, and found perfectly satisfactory in securing the desired end. We shall not attempt to theorize or explain why all vegetation has a body or stem, destitute of branches—it is sufficient, in this connection, to allude to the fact, that this natural law is an obstacle in the growing of hedges, and various methods of cultivation have been resorted to, in order to force the production of branches in opposition to that law. Those attempts have been attended with varied success, depending on local causes, but in the main with unsatisfactory results. Mr. Alderson's method obviates the difficulty without violating that natural law, and requires a much smaller number of plants in forming the hedge—thus materially lessening the cash outlay in the planting. His system is this:

Set the plants about ten inches apart, and cultivate them in the usual manner, until the stem is one-half or one-third of an inch in diameter. When they have attained the requisite size, cut the stem in half at the ground, and lay them lengthwise with the row, one on another, and cut off the lateral branches so as to leave the thickness desired, and you have at once a hedge impervious by any kind of stock. The shoots on the upper side of the stem, in obedience to another well known natural law, will grow perpendicularly and effectually prevent the inclined stems from being forced out of the position, in which they have been laid, thus giving to the hedge greater strength than it could otherwise attain. Every succeeding year's growth adds to the strength of the mass, and lessens the size of the interstices, a result, obvious at a glance, and just what is required to make a perfect hedge for use as well as beauty. No more labor is necessary in trimming annually a hedge thus formed, than is required by any other method of cultivation; and not more than is required for keeping in repair an ordinary plank or rail fence, on the average. Fifty dollars per mile will pay for plants, and a fair remuneration for all labor for cultivating until the hedge is completed—less than the interest on the amount required for building a plank fence, not worth one-fourth as much for practical purposes. This fact is well worth the attention of farmers everywhere, and is peculiarly important to those living in, or about to open prairie lands.–[*St. Charles Reveille.*

☞ There is rarely found in an anecdote more sound sense than is contained in the following, related of Bakewell, by Mr. Beasly in a lecture just published in London:

Large and Small Farms.—The late Mr. Bakewell, of Dishley, was not only an eminent agriculturist and breeder of stock, but a very wise and shrewd man, and his neighbors were in the habit of resorting to him for counsel and advice. On one occasion an old friend went to pay him a visit for the purpose of explaining to him his position, and at the same time begging that he would recommend him what to do. He had lived all his life upon his own farm of 1000 acres; he lived very well, but he had never saved a shilling. He had three daughters, and the eldest was about to be married; he highly approved of the match, but the intended husband expected some portion, and he had nothing to give him. Should he mortgage his estate, or what should he do? Mr. Bakewell begged him to spend the night with him, and promised the next morning to give him the result of his cogitations. Accordingly, the next morning, when they met at breakfast, Bakewell said, "I have made up my mind what you ought to do; give your son-in-law one-fourth of the farm, keep the remaining three-fourths, and do not part with any portion of your capital and stock, and work the remaining three-fourths with it. Do it better than you have hitherto done, and your income will be rather increased than diminished." His friend followed his advice, but at the end of two or three years, another daughter would be married, and the perplexed father again resorted to his friend Bakewell for advice, under this new difficulty. Bakewell coolly said, he had watched his proceedings, and seen their results; he must do in this case as he had done before: he must give up another fourth of his farm, and keep the original capital and stock. The father seemed somewhat puzzled, but, as the first experiment had succeeded, he determined to try it in this case also. Last of all the youngest daughter was to be married, and, in utter despair, the poor father paid another visit to Dishley to explain his perplexity. "Well," said Bakewell, "tell me honestly whether your income has diminished by having your farm reduced one-half." The father acknowledged he thought it had not. "Then," said Bakewell, "you must give up another fourth of your farm, and keep the remaining 250 acres for yourself, and, to tell you the truth, you will then have just such a farm as your stock, your capital, and your head are fit for, and will be a better and happier man than ever." Old Bakewell used to tell this story with great glee, and declared his friend left as much stock and capital upon the 250 acres as he ever had upon the one thousand, and, as he believed, made a better income out of it. This may be a somewhat exaggerated statement, but of this I am sure: a small, well cultivated farm, will make a better return than a large, ill-cultivated one.

Put down false speaking and accusation, so that you may protect and rescue the honest and innocent.



Sheep Husbandry—Fattening Sheep.

In some portions of the United States and Territories, sheep husbandry is receiving unusual attention, and with the most satisfactory results. The climate of Texas and New Mexico is found admirably adapted to this new department of stock raising as well as to that of neat cattle. The efforts of George W. Kendall and a few other enterprising farmers in introducing sheep into South-Western Texas has been crowned with the most marked success, and has induced hundreds of others to settle in that country with the object of extensive sheep raising. Within the last twelve months the stock of sheep driven from other parts of the country into Texas has amounted to hundreds of thousands. We are informed that our most ordinary sheep, after feeding in those regions increase in size one-quarter or one-third over their ordinary weight in other less favorable sections of the country. Of course with this evidence of thrift and adaptation to that country and climate there is less loss sustained from the diseases to which sheep are ordinarily liable. There are many other portions of the country in which sheep husbandry might be greatly extended to advantage, with but the single exception—that of loss sustained by vicious dogs. The only remedy that we can conceive to be available in this respect must proceed from State legislation, and that, thus far, has made but little progress. But notwithstanding the great losses sustained in the older sections of the country by sheep killing dogs, it is regarded as an important branch of farm husbandry. These sections, situated near the great markets, besides the value of the wool, the mutton commands a ready sale at prices corresponding with prices of the best beef. All things considered, many farmers find that sheep raising is more profitable than that of neat cattle

Like every other branch of farm husbandry, the profits of sheep raising depend upon the care and management bestowed, not only in the protection of the animals, but in adopting a proper system of feeding and fattening that will afford the best carcase at the least cost. In the more favored climate of the countries of Texas and New Mexico, but little care is required to make the best mutton, but there the chief profit is derived from the wool; but in the older and densely settled portions of the country the meat is the principal consideration. Whether sheep are to be fattened in summer or in winter, it is important that they should be well kept and brought into a thriving and good condition before rapid fattening is attempted. In this state their digestive organs are strong, and full feeding may be expected to secure rapid fattening. A poor animal, taken from a scant pasture and fed freely upon grain will become cloyed and in some measure diseased in consequence of excessive nutriment.

An animal, in a strong thriving condition, intended to be fattened for the butcher, should be full and regularly fed so as to secure the greatest weight of flesh and fat from the quantity of food consumed. The kind and quantity of food must depend in some measure upon the climate and season of the year. A certain quantity of food is necessary to sustain life and to support the natural waste of the body, and the sooner the greater quantity of flesh and fat is put upon the animal, the sooner, also, will the natural waste be brought to a close. These are facts that should be considered in feeding all kinds of stock.

With this view, in summer, the pasturage should be ample and nutritious, so that the animals will not be required to range over a large surface in order to fill themselves; and in order to maintain health and full appetite, they should be frequently changed from one field to another, unless they have a large range.

Young animals should be fed with more caution than old ones, because their digestive powers are weaker than those that have arrived at maturity. They will, also, generally require more time to fatten, as a portion of the food consumed is appropriated to the development of mutton and flesh.

Sheep fatten much more kindly during warm weather, and hence at less expense than during fall and winter. Young, thrifty animals, on good pastures, and frequent changes of it, with suitable condiments will generally fatten without grain. But when it is desired to fatten sheep rapidly, or where old sheep are to be fattened off, pasture alone will not suffice. In these cases a moderate quantity of grain may be fed to advantage. One bushel of grain fed in summer

will make as much fat as four will in winter.

The quality of the mutton depends both upon the breed of sheep and upon the kind of food upon which they are fattened: though there is a large section of our country in which no provision for shelter is made and no grain is given in fattening sheep; but in the colder and more exposed portions of the country shelter is particularly necessary in fattening sheep during the latter part of fall and winter, when grain or its equivalent is indispensable.

In fattening any kind of farm animals, one important fact should never be lost sight of. It is, that quietude and warmth are indispensable requisites in the fattening process, no less so than a full supply of nutritious food; and it is a great waste of food to attempt to fatten any animal without first securing, as far as possible, these requisites. The experience of every observing feeder, as well as science, proves this. The fact is also easily explained. Motion increases respiration, and the excess of oxygen thus received into the lungs, requires an increased quantity of carbon, which would otherwise go to the production of fat. So, also, *animals exposed to cold are unduly deprived of animal heat;* to restore this more oxygen and more carbon will be consumed in the extra combustion, in restoring the loss of temperature by the exposure.

In the over stocked Island of Great Britain the economy of food in rearing and fattening farm animals has long been a matter of close study and investigation, which have illustrated numerous facts from which valuable lessons may be learned by American farmers; although the necessity for rigid economy does not exist in all parts of the United States, the facts adduced are, nevertheless, important. The following facts were illustrated by experiments by a distinguished lord of England:

One hundred sheep were placed in a shed, and ate 20 pounds of Swedish turnips each, per day; while another hundred, in the open air, ate 25 pounds each, and at the end of a certain period, the former animals gained each 30 pounds more than the latter; plainly showing that to a certain extent, *warmth is a substitute for food.* This was also proved by another nobleman, in other experiments, which also illustrated the effects of exercise.

No. 1. Five sheep were fed in the open air, between the 21st of November and the 1st day of December. They consumed 90 pounds of food per day, the temperature being 44 degrees; at the end of this time, they weighed 2 pounds less than when first exposed.

No. 2. Five sheep were placed under shelter, and allowed to run at a temperature of 49 degrees; consumed at first 82 pounds, then 70 pounds per day, and increased in weight 23 pounds.

No. 3. Five sheep were placed in the same shed, but not allowed any exercise; they ate at first 64 pounds, then 53 pounds, and increased in weight 30 pounds.

No. 4. Five sheep kept in the dark, quiet and covered; they ate 35 pounds per day, and increased in weight 3 pounds.

A similar experiment was made by another distinguished farmer in the same country. He placed 80 Leicester sheep in an open field, they consumed 50 baskets of cut turnips per day, besides oil cake. On putting them into a shed, they were immediately able to consume only 30 baskets and soon after but 25, being only one-half the quantity required before; and yet they fattened as rapidly as when eating the largest quantity.

From these experiments it appears that animals will fatten upon the least quantity of food when they are kept closely confined in warm shelter; and the greatest quantity is consumed when allowed to run out exposed to the weather. But it is also evident that a certain amount of exercise is necessary, for if full fed and kept constantly confined the digestion of food is less perfect and consequently the meat is not so good.

In the United States, farmers are confined to a less variety of food for fattening sheep and other farm animals than are available in Great Britain. Indian corn with us is the leading grain. Where this is not so cheap and abundant as in the Eastern States, oil cake and turnips with grain, constitute an excellent food for rapid fattening.

Sawdust as a Bedding and as a Manure.—"Dry sawdust," says a correspondent of the *New England Farmer*, "is one of the best articles for bedding horses and cattle, to take up the urine and keep the cattle clean. But hard wood is the best, * * and should be used freely for bedding, even if you have to go miles for it; it will answer every purpose of going to Peru for guano." Such sawdust put on land right from the saw, especially on a thin dry soil, is of considerable value, as an experiment mentioned by the writer above quoted proves.

Pin Worms in Horses.—The *New England Farmer* gives the following remedy: Mix a gill of clean wood ashes with cut feed, and give the horse every other day one feed for a week, and watch the result. If you observe small white streaks about the anus, continue the doses a week longer.

SPAYING COWS.

Spaying cows for dairy and family purposes, we are sure would be more generally practiced if the process was better understood. It is a simple operation, but to be successfully performed the operator should have some knowledge of the anatomy of the animal, and should possess some little surgical skill, sufficient to give him the confidence necessary to perform the work without hesitation, and in an easy and humane manner. The advantages of spayed cows, whether for milk or for fattening purposes we have before alluded to in the columns of the *Valley Farmer*. Recently the administering of ether and chloriform combined, as is often practiced in surgical operations upon the human subject, has been found to be a most valuable auxiliary, giving the operator a perfect control over the animal, as much so as if it were dead; and with a perfect knowledge of what he desires to do, it is done with ease and dispatch, causing little or no pain or suffering to the animal. In the vicinity of Boston, Mass. Dr. Dadd. Veterinary Surgeon, has spayed a considerable number of cows for different farmers and dairymen, using ether and chloriform, and in every instance, so far as we have learned with perfect success. A late number of the *American Stock Journal* contains several statements from the owners of the animals operated upon setting forth the advantages of spaying, and of the regular and increased quantity of milk given by the cows.

For dairies employed for the supply of cities with milk, an equal quantity and regular supply of milk can be kept up throughout the year from one-quarter to one-third less number of cows when spayed than is required when the cows are left to follow the natural course. The milk too is of better quality, and undoubtedly more healthy than that drawn from cows subject to periodical seasons of excitement, which have a wonderful influence upon the quality of of the milk.

Upon the advantages of spaying we copy the following from the *Canadian Agriculturist:*

"This somewhat novel practice will not of course be adopted in country dairies, since in such the rearing of calves is a matter of importance, yet it remains to be seen how much good the practice will effect in large towns, in which cows are kept exclusively for the milk they yield. Levrat, a veterinarian of Lausanne, performed the operation on five cows in 1838, and he reports that 'the removal of the ovaries causes a continuation of the secretions of the milk for several years, just as it was at the time of the operation. The quantity may be augmented by one-third, and the quality is better.'"

Mr. Gamgee, an eminent Veterinary Surgeon, of Edinburg, calculates that to keep up a dairy of thirty good milkers, from fifty to sixty must be purchased annually, and this because, on an average, a cow is dry eight months after calving; and what with sickness and death, it is, he thinks, a fair calculation that to keep a dairy of thirty cows in milk, sixty must be annually purchased. Spaying avoids the loss by æstromania (butter), and by the custom of having dairy cows bulled when intended for the butcher. The spaying of cows is unquestionably, observes Mr. Gamgee, the safest method of avoiding such losses. A spayed cow yields milk about twice as long, and hence twice as much as that given by a cow under ordinary circumstances. She fattens readily, laying on flesh from the time she is spayed, but very rapidly after she has ceased to give milk. There is no loss by pregnant cows, and spaying is the only sure means of cure for æstromania. It seems pretty certain that the milk of a spayed cow is richer than that of any other animal. Grandval and Maumene found in 1,000 parts of the milk of cows under ordinary circumstances, from 66 to 80 parts of cheese and butter; and in 1,000 parts of that from spayed cows, 101 or 117 or 150 parts. An analysis of a 1,000 parts of the milk of a cow, before and after it was spayed in the Royal Veterinary College of Turin, gave the following results:

	Before.	After.
Water, - - - - -	864.40	855.50
Butter - - - - -	42.20	50.10
Milk and soluble salts, -	52.10	37.80
Casein (cud) and unsoluble salts,	41.30	56.60

Training Colts.—A colt at six or eight weeks, is old enough to commence with, and not so strong but two men can easily manage it, and a less number will be insufficient to do the work properly, as there will be danger that he will struggle and throw himself, thus endangering life and limb. The operator should be sure that his halter is one that will fit easily to the head; one that will buckle is preferable. Put the dam in a stall, and let the colt have a place by her side, and it will be easy, by a little coaxing and care, to put the halter upon it. Then let both dam and colt into an open place where there is plenty of room; let one get the halter and at the same time another take his place in rear of the colt to push him forward, while the other pats him and pulls lightly upon the halter. The colt will soon learn what is wanted, and follow the lead of him who holds the halter. Care should be taken that he does not pull back and throw himself. The principal force applied should be by the rear operator. When he has partially learned to follow the leader, hitch him to the harness of the dam, so that he can reach forward to her head; and lead her forward, having one in the rear to push him if he hauls back.

FATTENING SWINE.

Pork making is one of the most important branches of farming with those who make it a part of their system. The constantly increasing value of Indian corn renders it necessary that a system of more economical feeding be adopted than was practiced when corn was worth but fifteen or twenty-five cents a bushel.

If hogs have been supplied with good clover pasturage through the summer, and with perhaps the gleaning of grain fields, they are in a good condition to fatten rapidly as soon as the corn is suitable to feed. The earlier the fattening process is commenced the better after the corn has fairly reached the milky stage, when it may be cut up and fed, stalks and all, to great advantage. At this period of maturity the chief nutriment contained in the stalks as well as the grain is appropriated; for the hogs are fond of grinding up the stalks entire. Between this period of the maturity of the corn and that in which the grains are perfectly glazed and begin to dry and harden, hogs will make at least one-third more flesh on the same quantity than after it becomes thoroughly dry. This fact has been clearly established in the numerous experiments of feeding corn dry compared with that which has been cooked; and no condition in which corn may be reduced by cooking after it has once become dry will improve its fattening tendency beyond that in which it is brought by nature while in the doughy state. Besides the advantage of feeding corn in this state, the weather at this season is greatly more favorable to the fattening process than after it becomes cold and rainy. There is an immense loss sustained by the country by delaying the fattening of hogs to a late period. Confined as hogs usually are in large numbers in an open lot, connected with a pond or stream, with nothing to shelter them from the storms, the entire lot becomes a mass of mud, and during the prevalence of rains and cold winds, after November sets in, there are but few instances where the corn that is fed is not worth more in market that the pork will bring that is made from it. More care in the feeding and management of swine, after cool weather sets in, should be adopted, unless farmers are content to feed at a loss. Hogs require better shelter and more protection from the cold storms and winds, and the adoption of some system for economically preparing the food after it has been gathered and become dry and hard. Corn fed whole, is too concentrated a food for any animal when fed alone. It needs dilution in some form by grinding and mixing with water, or what is far better by cooking. We fed at one time one hundred hogs, giving two bushels of sugar beets to one of corn, and although the beets contained, comparatively, but little nutriment, yet the hogs fattened faster than if the same number of bushels of corn alone had been fed to them. While feeding the beets the hogs drank but little water. All who saw them were surprised to see the rapidity with which they fattened, and at the small quantity of corn that they consumed, yet beets cannot always be raised to advantage, but what will answer a similar purpose, reduce the corn by grinding and boiling so as to increase the bulk to three times or more that of the unground corn.

Poisonous Properties of Brine.—It may not be known to all our readers that brine, in which meat or fish have been salted, is poisonous to domestic animals. If left in their way they will partake freely of it as they will of pure salt, when it very often proves fatal. The *L' Union Medicale*, a French publication, gives an account of the researches of M. Reynal in regard to the poisonous properties of brine. From a series of experiments detailed, he draws the following conclusions:

First—That three or four months after its preparation, it acquires poisonous properties.

Second—That the mean poisonous dose for a horse is four pints; for the hog, one pint; and for a dog four to five gallons.

Third—That in less doses it produces vomiting in the dog and hog.

Fourth—That the employment of this substance, mixed with the food, continued for a certain time, even in small quantities, may be fatal.

We know from experience, that brine, if swallowed by hogs and other animals will prove fatal, yet we doubt if the subject is susceptible of the definite results as stated by M. Reynal, for the degree of the poisonous properties of the brine depends on various circumstances. We have known a much less quantity to prove fatal than that stated above.

How to Prevent Sore Shoulders in Working Horses.—An exchange says: The plan we have tried and never found to fail is to get a piece of leather and have it cut into such a shape as to lie snugly between the shoulders of the horse and the collar. This fends off all the frictions, as the collar slips and moves on the leather and not on the shoulders of the horse. Chafing is caused by friction; hence this remedy is quite a plausible one, and is much better than tying slips of leather or pads of sheepskin under the collar.

PLEURO-PNEUMONIA.

Saint Louis Township, August 24th, '60.

Eds. Valley Farmer—During the season there has been much excitement in the Eastern States, in relation to that dangerous cattle disease, Pleuro-Pneumonia. Some of the neighboring States have taken steps to prevent its spread in the West.

I propose now to give my views in relation to this disease, with the proper remedies, which if administered in time will save nine cases out of ten.

It made its first appearance in England in the year 1842, and proved to be a most direful scourge to that country; it swept off thousands of cattle, and many large breeders lost their entire stocks. There is no doubt about its being highly contagious, still many cattle will not in the least be affected by it, as many human beings will pass through scatheless many contagious diseases. The first thing to be done is to separate the diseased as soon as taken, and keep them away from the healthy for some time, should they recover.

Symptoms.—The symptoms will present themselves to a careful observer in four different stages, passing from one stage to another until death closes the scene. *First*, the pulse is not much disturbed from its natural beat; but the respirations increase from 40 to 50 per minute. Three hours after perhaps they will be 50 to 60 or more; the temperature of the body of course will present the same kind of irregularity; the animal coughs frequently, which is attended with the discharge from the mouth and nostrils of a clear transparent jelly-like mucus; in the lower half of one or both lungs, a dulness of the respiratory murmur will be heard if the ear is applied to the sides of the chest.

Second Stage—The fever more intense, respiratory murmur more obscure, the animal becomes dull with loss of appetite, a creaking sound may be heard within the chest, the inspirations are also attended with a slight grunting noise, the flow of mucus from the mouth and nostrils more abundant.

Third Stage—The pulse becomes more quickened, the grunt during the act of breathing more loud and sharp, the cough more frequent, soft, and superficial. This cough is very peculiar: it is not the free, loud, open cough of health; but it is exceedingly short, superficial and dry, and when once heard, it is not readily forgotten. The animal also sinks rapidly in condition.

Fourth Stage—The animal breathes through the mouth, gasps for breath; saliva flows in great abundance from the mouth and nostrils; the teeth grind continually; tongue portrudes; the eyes present a wild, haggard, sunken, and distressed appearance; the animal is reduced to skin and bones; the pulse is jerking and thready; stands with legs wide apart, in which position they may remain for several hours; at last falls and dies almost without a struggle or a groan.

Treatment.—As soon as the owner discovers the nature of the enemy he has to deal with, he should remove the animal to a comfortable place, with plenty of air and light; the diet should be boiled barley, boiled oats, and steamed hay.

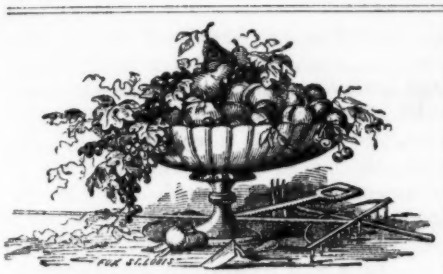
The medicines to be administered in the first stage is the pure tincture of Aconite in five drop doses, alternated with the first dilution of Bryonia in ten drop doses, every four hours in half pint distilled water. These are the remedies most to be relied upon, in the first stages of the malady; and in many cases I have known them to afford speedy relief.

Bryonia and Phosphorus, are indicated in the second and third stages, administered as above. Bromine in two drop doses is a valuable remedy where Phosphorus fails to produce the desired result. When the patient shows a state of convalesence, Arsenicum, of the second dilution will be found an excellent remedy; judgment and experience are necessary in order to select the proper remedy. If both lungs are diseased to a considerable extent, particularly if hepatization is complete, the animal will die.

TALLMADGE.

The Wool Clip of Crawford County, O.—Crawford is one of the largest wool-growing counties in the State, all of her farmers being engaged in the business more or less, and many of them largely. The following is a list of a few of the largest in this vicinity, with the amount each received for his clip, this season: Robert Kerr, $7,200; G. W. Leith, $1,200; James Kerr, $2,000, Nicholas Failor, $750; Jacob Thomas, $750; C. W. White, $1,200; S. D. Rowse, $2,500: John Monnett, $1,100; Wm. Kennedy, $800; Joseph Mason, $600; E R. Webb, $6,000; M. Charlton, $1,200; D. Pettitt, $700; D. C. Boyer, $700; James Hufty, $2,000; Elias Lavely, $1,400; Abm. Monnett, $1,500; John Hills, $1200; Robert Mason, $700; Mr. Knowls, $600. These are only a few of our extensive wool growers—we could give the names of forty more, whose clip amounted to over $600.—[*Bucyrus Journal.*

Pasturing Horses.—Few of the writers who have discoursed upon the management of horses have said anything about the summer grazing of these animals. Nor in fact, is it a subject upon which much of importance can be said. Yet there are some points connected with it, well worthy of consideration. Youatt says: "The spring grass is the best physic that can be given to a horse. To a degree which no artificial aperient or diuretic can reach, it carries off every humor that may be lurking about the animal. It fines down the roundness of the legs, and except there be some bony enlargement, restores them to their original form and strength. There is nothing so refreshing to their feet as the damp coolness of the grass into which they are turned, and nothing so calculated to remove every enlargement or sprain, as the gentle exercise the animal voluntarily takes while his legs are exposed to the cooling process of evaporation that is taking place from the herbage on which he treads. The experience of ages has shown that it is the most skilful physic of veterinarians. It is the renovating process of nature where the art of man fails."



HORTICULTURAL.

CULTURE OF DWARF PEARS.

Since the introduction of the Dwarf Pear into this country, many conflicting opinions have been expressed by various writers on the subject in regard to the adaptation of this form of tree to our soil and climate, and whether it can be grown to profit as a market fruit. Even among cultivators, those who were at first the strongest advocates of the dwarf pear, have since come out in opposition to their former expressed opinions. Others who have been more successful in their efforts still favor its cultivation, and furnish most conclusive evidence of the "faith that is in them" by the large crops of superior fruit they have grown, and the high prices it brings in the market.

However diverse and inconsistent these opinions of the various writers may at first appear, the whole matter is easily explained when all the contingent circumstances connected with the various attempts at cultivation are considered. These are adaptation of situation, soil, varieties attempted to be grown—whether suited to the quince stock or not—kind of stock, mode of preparation and planting, and most important of all, care in cultivation.

Of situation and soil we will not now speak, but it is well known that for years after the dwarf pear was introduced into this country, *ten* varieties were propagated where *one* now is found adapted to our soil and climate; experience has discarded these and reduced the number of really valuable varieties, as market fruits, to less than a dozen. At first, too, varieties of the quince were used as stocks entirely unsuited to the pear. It was not until recently that one secret of success, was generally known, that is, that the quince stock requires to be placed entirely below the surface of the soil, because when exposed to the drying influences of the sun and air, they act unfavorably upon the close compact grain of the quince stock. The various discussions, pro and con, finally revealed the fact that the tree must be set in the ground below the junction of the pear and quince. This became the rule, then, without regard to the hight at which the stocks had been worked; if this was ten or twelve inches high, as the ease and convenience of some nurserymen induced them to bud, to remove these from the nursery and set them in the orchard, according to the rule laid down, it placed the root so far below the influence of the important requisites of heat and air that the trees became actually starved before they could form a new series of roots at the point nature demanded.

In a late number of the *Horticulturist* the editor has taken up the subject of dwarf pears, and throws out some valuable hints on this particular point. Now it is determined by experienced cultivators what varieties of the pear are best suited to the quince stock, as well as what kinds of quince should be used. The practice of budding the pear as near the ground as possible should be strictly carried out in all nurseries, and where this is not done purchasers should reject all trees that are worked more than four inches from the ground, and a majority should never be budded higher than two inches from the surface. If nurserymen would keep this subject in mind when they set their stocks in nursery rows, and place each one at just that depth which would leave the most smooth and suitable point for budding at the hight the bud should be inserted, there would be no difficulty in budding low. Trees worked within two or three inches of the ground may be set below the junction without doing great violence to the natural laws of vegetable growth. If a tree be set with its roots ten or fifteen inches below the point indicated by nature, the lower roots must become diseased and finally decay, sending forth into all the branches the effects of the unhealthy condition forced upon it, before new roots near the surface can be formed; and if the tree does not absolutely die, it presents a sickly, stunted appearance, and seldom becomes vigorous and fruitful. This is not only true of dwarf trees but of most other kinds. Many persons have mistaken the idea intended to be conveyed by those giving instructions for setting trees, when directing that the holes should be dug large and deep, supposing that the roots are to be placed thus deep. The object of digging large holes is to have them filled up with rich, mellow earth for the roots to extend in, and except in the case of dwarf pears the tree should be set no deeper than when growing in the nursery.

But the greatest obstacle of all, in the way of

the successful culture of the dwarf pear (as well as of most other kinds of fruit), is the want of proper care in cultivation. The trees, if not set in the yard or lawn surrounded with an unbroken sod, find a place in the orchard or garden where they seldom, if ever, receive any further care or cultivation. If the example of the forest is to be taken, it should be remembered that nature there affords a protection with advantages equal to the best cultivation by the hand of man. Trees in their native forest cast their leaves upon their roots that not only check all other growth, but keep the earth, warm, light, mellow, and adapted to all the elements of growth and nutrition, such as moisture, air, warmth and the circulation of the gases, &c. In garden or orchard culture these are requisite, and no annual garden crop requires more thorough culture than trees.

PLANTING TREES.

The present season has been more than usually productive of fruit in many sections, particularly of the more robust kinds, as apples, peaches and pears, and this undoubtedly will induce farmers and others to plant more largely of trees for the coming season. It is a question often asked—Which is the best time to plant trees, the fall or spring? As a general rule we answer, fall. There are some situations where it might be advisable to defer the planting until spring, but on any land *suitable* for an orchard no injury need result from fall planting. In a heavy, wet, retentive soil, such an one as no intelligent planter would occupy with trees, it would sometimes prove destructive to trees, because of an undue quantity of water about the roots; but death to trees in such soil would result in no loss, for if they lived they would never prove productive. Fall planting, then, with proper protection may be regarded as best. Then, farmers have more time to do the work well, and this is a kind of planting that cannot be slighted without serious permanent loss. Tree planting is one of the many things that it is most profitable to do well. The ground for an orchard should be dry naturally, or it should be underdrained; but a high, dry, north hill-side, that requires no artificial draining, should, if possible be selected, and it would be well if the land had been occupied the season previous with some crop that has killed out the grass and wild growth. Nothing is more important in preparing a situation for an orchard than deep plowing or trenching. In order to have a permanent and fruitful orchard, strong and vigorous trees must be grown. A tree that grows but slowly and barely lives, cannot produce a crop of good fruit. The time was, when the country was new, that fruit could be grown with but little care; but from some cause, times, seasons, or circumstances have changed. Trees do not grow as well, and are subject to a variety of accidents, and hence to guard against these and to secure a good growth, care and intelligence must be employed in the planting and rearing of an orchard.

After the ground is well prepared by deep plowing, let the holes be dug broad and deep and then filled up with good surface soil so that when the tree is set it will stand just as deep as it grew in the nursery. Such trees should be selected as will bear to be cut back to within two or three feet of the ground, so that low heads may be formed. The long spindling trees pruned up to six or eight feet in the nursery are not fit to plant in any situation, and particularly are they unsuited to the exposed situations in the prairies. If the trees are trained low in the nursery, cut back the leading branch and thin out the side branches to a suitable number to form a clear open head, and then shorten the side shoots to three or four buds of the last season's growth. All subsequent pruning should be done during the season of growth: at any time when it is discovered that any branch is coming forth where it is not needed, or of making an undue growth, and likely to destroy the balance of the head, it should be pinched back so as to allow the others to come up with it. This kind of pruning affords recreation and pleasant employment for a leisure hour at any time when it can be spared from other duties. In this way a tree may be made to assume any form desired. A regular, systematic pruning, such as some men practice of cutting off the branches of the growth of a year or two should never be thought of. Let the pruning be perpetual and every unneeded branch nipped in the bud, or as soon as it is discovered out of place. An occasional hour employed in this way will keep an orchard always in order, and no unsightly "water sprouts" will ever be seen to tax the energies of the tree and throw it out of shape.

One word on the subject of purchasing trees. Great complaints, of late, are made of the trees brought from Eastern nurserymen, and sold by professed agents. Some of these men, no doubt, are honest dealers and will aim to do justice to their customers, but many of them secure the refuse stock of some establishment because it

can be bought cheap, and from this they are prepared to fill all orders of whatever kind. We have known hundreds of dollars worth of trees to be sold in a single neighborhood at prices 50 per cent. higher than genuine trees could be bought from regular nurserymen in the immediate vicinity. When it is possible to purchase trees near home from a reliable nurseryman it is always advisable to do so. Trees are subject to delay and injury from exposure in the transportation of long distances. When trees cannot be purchased near home send to some respectable and well known nurseryman and order what you want, and you may expect them to be packed and shipped so as to reach you in good order.

TO KEEP SWEET POTATOES.

The product of sweet potatoes per acre, when properly planted and cultivated, is equal or greater than that of Irish potatoes, but the difficulty of preserving them through the winter renders them of less value for home consumption. There is no difficulty in preserving sweet potatoes for double the period that it is possible to keep Irish potatoes. We have seen specimens, in large quantities, of sweet potatoes on exhibition together, the product of two season's growth, and those of the previous season's growth were as hard and as sound as those grown the season they were exhibited, and the only apparent difference in the two parcels was that the old ones were a shade darker in color (they being of the yellow and white variety). There is no secret in keeping sweet potatoes sound at least for one year. The only requisites are a dry situation, of uniform temperature, not below 38° or 40°; perhaps 45° or 50° would be near right.

The least expensive method of keeping potatoes for family use, is to pack them in boxes containing eight or ten bushels each and filled with dry sand or dust. Our practice has been to collect the dry dust from the road at the dryest period of the summer and reserve it till the time of harvesting the potatoes. The potatoes should be dug as soon as matured, or before a killing frost occurs; let the tubers dry perfectly, and then pack them in boxes or barrels, and fill in the interstices with the dry sand or road dust. Fine sand may be dried for the purpose in a large kettle, or in a log heap. The boxes or barrels should then be placed in a dry situation in a cellar, raised from the floor a foot or more and at as great a distance from the walls. If at any time the temperature is found likely to fall below the degree indicated, a small stove or furnace should be employed with moderate fire to warm and dry the room. Some market gardeners dig deep pits or cellars, twenty-five or thirty feet deep, in dry soils, walled up and lined with tan-bark, in which the potatoes are kept on shelves, a space being kept in the centre for a small stove to be used in extreme cold weather. We have also seen them kept in houses constructed on the plan described in the present number for keeping Irish potatoes, except that the space between the walls for the sweet potato-house should be at least two feet wide and filled in with tan-bark, and more care being taken to maintain an uniform temperature of the proper degree with a stove in cold weather.

Wilson's Albany Strawberry.

Everybody at all interested in fruit growing is familiar with the excellence of this celebrated seedling fruit. It is pronounced by every disinterested, intelligent grower as combining more good qualities than any one of the hundreds of kinds of strawberries known among us. Foremost among its good qualities are: Great size, unsurpassed productiveness, solidity of flesh and richness of color. It is true, if we could add to it the richness of flavor of Burr's New Pine we know of nothing further that could be desired to render it by far the most superior strawberry ever grown in this country. But take it as it is, if we were to be confined to one variety for market, or for home use with a limited quantity of land, there is no other kind that we would prefer to it. The sum of this opinion we believe to be almost universal with all who are familiar with it, and who are unbiassed by self-interest. It also possesses beyond all others a valuable quality—that of adapting itself to almost every variety of soil and climate where the strawberry is cultivated; indeed, we have never heard of an instance of its introduction into any section where it has not done well—except in the garden of the "*Messrs. Hovey*," who thus speak of it in *Hovey's Magazine* for July:

"Wilson's Albany has fruited with us this year, and has fully come up to our expectation, the sourest, most dirty colored and disagreeable flavored of the recently introduced sorts. The Chairman of the Fruit Committee of the Massachusetts Horticultural Society made the very apt remark, that it was an excellent sort to make vinegar of. Our excellent correspondent, Dr. Kennicot, has already informed our readers that he did not like its elderberry flavor—and he was quite correct, for it is medicinal enough. Besides, it is soft, watery, unfit for carriage, has a very large calyx, and is hollow at the core:

its only good qualities are hardiness and productiveness, which will please anybody. Speaking of these latter qualities to a cultivator, he thought they were no addition, for the more one had of them the worse he was off. Whatever strawberries are grown for the table and not for sale, the Wilson will find but few admirers. Since writing the above we learn the Fruit Committee of the Massachusetts Horticultural Society had passed an unanimous vote that the Wilson's Albany is unworthy of general cultivation."

Those who are familiar with the history of the "Boston Pear," (the old Pinneo Pear) and the action of the Massachusetts Horticultural Society in regard to it, will not be at all surprised to know that nothing in the strawberry line is visible through Mr. Hovey's glasses but *Hovey's Seedling and the Boston Pine*, which are superseded by the Wilson and other superior kinds.

But Mr. Hovey is again exceedingly troubled in regard to another new candidate for public favor—the Austin Shaker Strawberry. Hear him:—"The largest berries only measured four and a quarter inches in circumference, and it took fourteen to weigh a *quarter* of a pound, and thirty-two to fill a pint box."

[Written for the Valley Farmer.]

HORTICULTURAL NOTES AND GLEANINGS.

BY CAREW SANDERS.

ROOM PLANTS.

The editor of the *Horticulturist*, for September, has an excellent article on the subject of "room plants," with advice as to their growth and management; kinds best adapted for the purpose, and other important items of information; portions of which article we copy into our columns, knowing that there are hundreds in our city and country who are fond of room plants, and hundreds of others, who have the means and desire to possess a source of such innocent and rational enjoyment, if they thought they could only succeed with them.

Most people have yet to learn the true enjoyment of life; it is not fine dresses, or large houses, or elegant furniture, or rich wives, or gay parties, that make homes happy. Wealth cannot purchase pleasures of the higher sort; these depend not on money, or money's worth: it is the heart, and taste, and intellect, which determine the happiness of men; which give the seeing eye and the sentient nature, and without which, man is little better than a machine. A flower in your window sweetens the air, makes your room look graceful, gives the sun's light a new charm, rejoices your eye, and links you to nature and beauty. But, to the extract:

"It is true that plants cannot be as well grown in rooms, as in a well constructed greenhouse; but, notwithstanding, there are some kinds that may be grown and flowered in a manner quite satisfactory, and with results highly gratifying. Certain conditions are necessary for the best success, and these it is our object to point out:

"The greatest obstacle to success is the dryness of the air: this may, in a measure, be overcome by a table suitably constructed, and the selection of plants best adapted to a dry atmosphere. The table should be the length of the window, and two or three feet wide, the boards being tongued and grooved. Around the edge, nail a strip three inches wide, making the corners fit tight. The table is then to be filled with two inches of clean white sand. With a table of this kind, the foliage of the plants can be frequently syringed or sprinkled with water, which keeps them clean and promotes their health; the drippings and surplus water are caught and absorbed by the sand, and the floor of the room is thus kept clean; the sand, indeed, ought to be kept constantly wet, even watered for this purpose, if necessary.

"The evaporation from the sand will diffuse itself among the plants and through the room, and thus overcome in a small degree one of the chief obstacles to the successful culture of plants in rooms. [We would suggest that a layer of nice green moss on the sand, would not only retain and give off moisture, but have an elegant effect, in contrast with the brick-red of the flower-pots, and the usual colors of the furniture prevailing in the living apartment.]

"The table should be fitted with rollers, to facilitate the operation of watering and cleaning the plants, and also, for the purpose of moving it back from the window during cold nights.

"The flower-stands in common use, are altogether unfit for a room; the surplus water, dead leaves, etc., fall to the floor, injuring the carpet, and giving the room an untidy appearance. The table above described is free from these objections, besides having positive advantages for the successful growth of plants, which no ordinary flower-stand can possess."

He next goes on to say which is the best position for a window for plants, South, South-East and South-West, being the best; a large bay window, with a Southern exposure, posesses many advantages for growing plants.

We have not space to enumerate the list of plants suitable for window culture, or to dwell further on their management (we may recur to it again at some other time), but will just name a few of the best for winter blooming and decoration:

The noble Camelia is the finest of all, but is rather delicate to manage. The Laurustinus, Stevia, Daphne, Linun and Eranthemen Pulchellum, among woody plants, are good. And of soft-wooded plants, the Chrysanthemum (for early winter), Mignonette, Geranium, Heliotrope, Primula and Ageratum, are free flowering; while the bulbs, Hyacinth, Crocus, Narcissus, etc., if rightly managed, will furnish a splendid display during winter and early spring.

We cannot close without recording the writer's protest against a very prevalent belief, that plants kept in rooms render them unhealthy.

"It has been objected by some that it is unhealthy to keep plants in rooms; but their arguments lack coherence and force, and we are

compelled to record our experience against the position. We believe them, on the contrary, to be conducive to health, not only by their soothing and cheering influence on the mind, but as purifiers of the air, so that all may indulge their tastes without the least apprehension of injury to their health. We have no room for an argument here, but we believe that every vegetable physiologist will sustain our position; if he will not, then, in our opinion, he has something to learn."

SHORT OR LONG PRUNING OF GRAPES—WHICH IS BEST.

A few years ago, several of our most eminent horticultural writers broached the idea of the probability of the close or short pruning adopted in vineyard culture in this country, of being the cause of all or part of the mildew and rot, and other diseases which the grape is heir to in our climate.

They argued in this wise: That the Catawba and Isabella being natives to the "manor born," ought to maintain a healthy existence under culture as well as in their wild state, so far as climate is concerned.

They argued further: That we follow exclusively the example set by our worthy German vine dressers, who bring with them the ideas and methods of planting and pruning, &c., that they have been accustomed to in Fatherland, and never once think of change, but practice the same close pruning, close planting, &c., on our strong and robust growing varieties of grapes planted in a rich, deep, and fertile soil, under an almost tropical sun in summer, and remarkably variable temperature at all seasons, with severe naked winters, of sharp frosts, hot suns, biting winds, and no shelter; practicing precisely the same methods—they urge—that they have been accustomed to on their weak growing varieties, in their worn-out, poor and rocky soils, on the steep declivities, where high culture is impossible.

It does seem that there is reason in their arguments, and, as it is a most important point in grape culture to be decided, we ask, who has any new facts to offer for or against this short pruning derived from the past year or two's experience?

It appears that some of our Herman friends have already decided in favor of the short and against the long system of pruning. But then we know that some of the Cincinnati *professors*, cast mysterious and pregnant reflections on the practices of the *savans* of Herman.

Who can controvert the following? That there are grape vines in Europe grown both under glass and in the open air, that with a moderate and judicious yearly pruning, having attained age, do cover a large space, maintain a healthy existence, and bear many hundred pounds of grapes every season, even up to the ton of the Hampton Court vine. Who has not seen arbor and trellises in all parts of our own country covered wtth Catawba and Isabella, if fairly treated, and not neglected in toto, bearing hundreds and hundreds of bunches; bunch and berry as large, and at least *as free* from mildew and rot on the average as those under the short system in the vineyard? Does it seem more absurd to restrict the apple or the peach to a few branches and a bushel or two of fruit, than it does to suppose, that the limits of a healthy bearing existence in the Catawba grape, consists of two or three feet of cane and from twelve to fifteen bunches of fruit? We think not. The reason why a grape vine is planted at every rafter in graperies, is to gain time; three or four would fill a house as well as twenty, but it would take some years before they could cover the same space with bearing wood as the twenty. By planting at every rafter, as soon as they come into bearing they bear a whole house full at once. As good crops of Isabellas and Catawbas as we ever saw, have been grown on high trellises where little or no summer pruning was practiced, and the vines had hundreds of feet of wood, the branches hanging over from the top of the trellis in wild but graceful confusion, and hiding completely the fine bunches of well colored grapes that clustered in profusion beneath; and this, we have seen, not once or twice, but repeatedly.

Let facts and experience decide this question.

THE PESTS OF THE FARM.

There is not a crop that the farmer or gardener cultivates, but has its peculiar or special enemies. The cabbage crop is no exception to this rule, but is burthened with rather more than its share of enemies in our gardens here, we think.

It commences its existence with the fly, which often eats up sowing after sowing, in spite of all the wars that may be waged against them.

Further along, we often have the grasshopper, very numerous and destructive, and the larva of the cabbage butterfly proper, which feeds only on cabbage, or members of the cabbage family, as turnips, radish, &c. But, this season, the cabbage has a new enemy (at least to us), attacking it.

This is the larva or caterpillar of a moth, that has deposited its eggs on the cabbage.

The larva is of a pale green color, smooth, and about an inch long when fully grown; its locomotion is of the measuring kind, drawing its body up together in the middle, and throwing its forepart forward, drawing the hind part after it. It differs from the larva of the cabbage butterfly in this, that it comes earlier in the season, and its habits of feeding are different. The butterfly larva eats the edges of the large outside leaves, and jags and ribbons them up greatly, while the moth larva eats the leaves into holes all over or anywhere; and, what is worse, bores up into the heart of the cabbage from beneath, making great holes, and injuring the sale.

We know enough about the habits of these insects to say, that picking off the caterpillars by hand is the only remedy, and this is too tedious and expensive; any other effectual remedy must be arrived at only by their total annihilation; for they are like the house-fly, a few perfect insects that have escaped the winter, at the commencement of the season, from their rapidity of multiplication, will subject a cabbage patch to extensive destruction before the season is over.

THE LINNÆUS RHUBARB BEST. WHY?

We shall compare it with the older varieties,

as Victoria, Downing's Colossal, &c. Many growers already consider it the best, others object to it. It has too short stalks for one, too green for another, too small for another, and so on; but we claim the following advantages for it: It is early, two weeks earlier than Victoria, and not much, if any, behind the earliest small kinds, enabling one to have a large variety in market or on the table as early as a small one. It is large and long, neither, quite as much as the Victoria perhaps, but decidedly so compared with any of the kinds in common cultivation. It is productive; we think it is not too much to say, that it will produce two stalks to one of the Victoria, take the season through. It is late with the exception of a resting spell or two; it produces new leaf-stalks all summer, and towards the end seems to take a new lease of its life, for it produces its young stalks abundantly, thus coming in excellently for Rhubarb wine, drying and preserving.

Besides the above, it has a thin skin, a mild acid juice, and tender flesh, equal in these respects to the best, and superior to many.

[Written for the Valley Farmer.]

Meramec Horticultural Society.

Allenton, 1st September, 1860.

The twenty-first monthly meeting of the Meramec Horticultural Society was held in the house of Mr. Wm. Harris. The President in the chair.

The minutes of former meeting were read and approved.

The Special Committee appointed to prepare and circulate a Circular on the subject of a "State Board of Agriculture for Missouri," reported having prepared said Circular, had 250 copies printed, and over 200 circulated.

The Corresponding Secretary reported having received a letter from the Gasconade County Agricultural Society, inviting the officers of the Meramec Horticultural Society to their fair, to be held at Herman, on the 5th and 6th inst.

The Fruit Committee reported: Presented by Mr. Ferdinand Paul, fine large bunches of Catawba grapes, and Heath Cling peaches; by Mr. C. Paffrath, German prunes, fully ripe and superior, also, very large orange yellow plums, supposed to be the orange, two inches in diameter at base; by Mr. E. Vaughn, Pennock apple, inferior in condition, and Fall Pippin in good condition; by L. D. Votaw, very large apples, unripe, unknown. L. D. Morse, Chairman.

The Flower Committee reported: Hand Boquet from Mrs. Dr. J. B. F. Beale, in fine condition for the dry season, composed of Coxcomb, four varieties Aster, two varieties Petunia, Globe Amaranth, Chinese Pink, Sweet William, Ledum, Mignonette, Artemesia, Veronica and Moss. Wm. Muir, Chairman.

Vegetable Committee reported: By Mr. Wm. Harris, Neshannock potatoes from early crop, fair, medium; Bermuda sweet potatoes, fair specimens; by Mr. E. Vaughn, pale red sweet potatoe, fair; Nansemond sweet potatoes, fine specimens. By J. B. Harris, English Fluke potatoes, fine specimens from early crop; fine, fully developed specimens of white corn, of what is known here as the Collier variety, from early planting. T. R. Allen, Chairman.

On motion the meeting adjourned for dinner.

The Afternoon Session was opened by the discussion of the subject for the day, The Comparative Advantages of Fall and Spring Planting of Trees.

Dr. L. D. Morse, said that the best time for planting trees was a question of doubt in the minds of some of the best horticulturists. I long held to spring planting, but now conceive that in our climate fall planting is best. If set early in the fall and set well, the soil becomes settled among the roots and the trees are in a position to commence their growth with the first opening of spring. Plant from the time the leaves fall till the middle of November. The ground can be got in better condition in the fall than spring, and there is more leisure then to plant them well. Trees hurried in late in the spring, as is often the case, with the ground illy prepared, and carelessly placed around the roots, if a dry season like this follows, will generally dry up and die in midsummer. Raise a mound of earth around the foot of the tree in fall planting.

Mr. Richter said, I have planted both in the fall and spring, and find but little difference in the growth.—I think the most important part is to plant well. I prefer early in the fall, because it affords more time to do it well; but if it gets late in the fall spring is better. In fall raise a small mound round the tree; in spring make the ground hollow or dishing around it. I planted 225 trees this spring, and very late it was, and lost only two. Fall planting must be done in October, and spring planting should be done before the buds open, to do well. As to the mere growth, I know no difference, the principal benefit is the saving of time.

Mr. Airey asks, will not draining be better than making the mound?

Mr. Richter said, draining in all cases is desirable, but is so seldom done we can hardly notice it in a simply comparative inquiry; but, besides the benefits of throwing off the surplus moisture, it supports the tree against the pressure of storms.

Mr. Vaughn asks, if the same holds good with the peach, plum and cherry.

Mr. Richter has not had such an extensive experience with these as with the apple.

The President said he agreed with the most of what had been said in favor of fall planting. By being planted in the fall they were well established and ready to commence growth with the first opening of spring. Three years since, I planted in the beginning of January, 55 Peach trees out of a lot of 270; the season was fine, but suddenly changing to wet stopped my operations till spring, when I planted the remainder. The 55 planted in the winter made a much finer growth than the others, and the difference is still to be seen, and looks like the difference of a year's growth. In taking out the trees that had been heeled in during the winter, I have observed the fine rootlets, with the new white growth quite considerably developed, showing the recuperative power at work, even during the winter, attempting to repair the injury the roots had sustained in taking up the trees.

Mr. L. D. Votaw, prefers spring planting.

The Executive Committee proposed, "Under-draining and Sub-soil Plowing," as the subject for the next meeting.

The President announced the next meeting to be held at the house of Mr. Parker Airey, above Allenton, on the first Thursday of October.

On motion, the meeting adjourned.

Wm. Muir, Sec.

Packing Apples for Market.—In some of the more favored portions of the country, the apple crop is of no small importance to the farmer, a single county sometimes sends off to the amount of $300,000 in a single season. The value of the apples in market depends very much upon the manner of treatment and handling before packing.

Apples, after being gathered and left in a pile or packed in barrels, sweat considerably, giving off several pounds of their weight in moisture. In order to prevent the apples from rotting they

should be laid in a heap twelve or eighteen inches deep, and covered with straw under a shed, where in a few days they will sweat and give off a portion of the water. They should then, on a dry day, be uncovered and exposed to the air; and when dry, packed at once in barrels and shipped off to market. After a while they will undergo a second sweat; when, if again dried, they will be less liable to rot. These conditions are observed by those who pack apples for long sea voyages; otherwise they would be liable to serious loss.

To avoid injury from bruising, apples should be closely packed in barrels so that it is impossible for any of them to roll or change. In order to do this they should be gently shaken, and the head pressed down with considerable force, so as to rest hard upon the apples. If the sides of the apples that come in contact with the head are considerably flattened it will not cause them to rot—the head absorbs the moisture—and these generally remain as sound as any of the apples in the barrel.

[Written for the Valley Farmer.]

A Special Meeting of the Missouri State Fruit Growers' Association.

HERMAN, Gasconade Co. Sept. 7, 1860.

A special meeting was held as above, according to call. The President, Norman J. Colman in the chair.

The business was opened by an address from the President.

A letter was read from Dr. Warder, regretting his inability to attend the meeting in consequence of the meeting of the National Pomological Association to be held in Philadelphia.

Twelve new members were admitted.

A large number of seedling and specimen apples; different varieties of the grape; samples of different native wines, and canes of the Catawissa raspberry in full bearing, were presented to the Association.

The Black Catawba was examined, but had no special merits. The Delaware was exhibited, and pronounced, as far as tried, the best of all native grapes. The Clinton was presented; its peculiar, somewhat foxy flavor, was easily recognized; it was remarked as a very early bloomer, and promised well for wine. A grape was exhibited which had been cultivated as the Burgundy. The To Kalon was generally admired and thought highly worthy of further trial.—The Garrigues was noticed and held worthy of trial. The Cunningham was exhibited; name supposed to be erroneous; a fine grape; medium bunch, very compact. Berry, medium, light red, with bluish white bloom; sweet, juicy, and makes a fair wine; said to resemble the Red Alba grown near St. Louis; worthy of further trial.

Over thirty varieties of grapes were exhibited.

The vote was then taken upon, Which are the BEST TABLE GRAPES, (as purely amateur grapes)? When the following four were adopted as such, in the order in which they stand: 1. Delaware; 2. Herbemont; 3. Concord; 4. Catawba.

The vote was then taken upon the BEST MARKET GRAPES (as purely money making grapes)? Which resulted as follows: 1. Concord; 2. Delaware; 3. Catawba.

The vote was taken upon the BEST WINE GRAPES, (as far as they had been tried here), which resulted in favor of: 1st. Norton; 2d. Herbemont; 3d. Catawba.

It was then, on motion,

RESOLVED, That it is our opinion, from what we have seen, that when the Delaware has been sufficiently tried, it will be found to be the BEST TABLE, MARKET AND WINE GRAPE IN AMERICA.

A Committee was then appointed to examine the Seedling Fruit on the table, viz. Dr. Morse, Dr. McPherson and Geo. Husman.

Mr. M. Poeschel remarked, that the Herbemont grapes produced a gallon of wine from nine and a half pounds of grapes.

Mr. Noe remarked, that he found old Herbemont vines as hardy as the Catawba, and needed no more protection than they did.

On motion,

RESOLVED, That we are under lasting obligations to the Fruit Growers of Herman, for the generous hospitality which has been so freely extended to the visiting members of the State Fruit Growers' Association; for the unwearied pains they have taken in showing us their vineyards and fruit products, and in explaining their methods of culture, pruning, &c., for all of which we hereby return our most heartfelt and sincere thanks.

On motion,

RESOLVED, That we cordially approve of the object of the circular recently published by "The Meramec Horticultural Society," recommending the calling of a Farmers' Convention at Jefferson City, for the purpose of taking into consideration measures for agricultural improvement in Missouri.

On motion,

RESOLVED, That we hereby solicit from the President a copy of the Address delivered before the Association, for publication.

On motion,

RESOLVED, That a committee of three be appointed in Herman to endeavor to ascertain the number of pounds of grapes raised in Herman; the number of gallons of wines manufactured; and the number of acres under cultivation in the grape, and to report as early as possible to the Committee on Grapes and Vineyards.

The President appointed Geo. Husman, Jacob Rommel and M. Poeschel, said committee.

On motion, the meeting adjourned till Tuesday, 25th September, at one P. M., at the St. Louis Fair Grounds. WILLIAM MUIR, Sec.

Peach on Plum Stock.

EDS. VALLEY FARMER:—An article at p. 254 of the current volume of the *Farmer*, with the caption of, "*How to Grow Peaches every Year*," is attracting considerable attention from fruit growers. The writer recommends the procurement of peach trees grafted on wild plum stock, and asserts without qualification that the trees so grafted will outlive the common age of man, and that the fruit will never be winter killed on such trees, and that from the lateness of their putting out in the spring they will escape spring frosts. Now, it so happens that I have some experience on this very subject, and from the results of that experience I am induced to suspect that the writer of that article is an out-and-out theorist, and that his system has never been fairly tested. It is universally known that the peach tree in the West is very short lived; I have also observed that it was a very rare thing to see a dead wild plum tree in this region, and that therefore if the peach could be transferred from its own root to the wild plum

we might have almost a perpetual peach orchard. Having an abundance of plum stocks of numerous varieties about my premises, I went to work and inserted a considerable number and divers varieties of the peach on plum stocks, not, I admit, by grafting, but by budding, which method of propagation is, I believe, proposed by a majority of nurserymen for all the stone fruits. My buds about all took and grew apace, and the second year produced fruit, and all continued to grow and prosper until most of the peach trees in about four years had become too long and heavy for the plum stocks, when the weight of the trees with a heavy crop of fruit broke off most of the plum stock just below the insertion of the bud. I had however budded a few in a very large, thrifty, fast growing variety that had sufficient strength in the stock to support the peach top, but in about eight years had so much outgrown the stock, as to form a collar and choke themselves to death by slow degrees. Whether the plum stocks would impart hardihood enough to the peach to prevent winter killing, my experiment does not prove, as the peach on its own roots was not winter killed during the lifetime of my trees. As to the plum stocks saving the peach from spring frosts that is all folly, as the two bloom simultaneously, except that a few varieties of the plum are in advance of the peach. JOHN SMITH.

Pomona, near New Melle, Mo. Aug. 22, 1860.

A Visit to the St. Louis Vine and Fruit Growers' Lands.

EDS. VALLEY FARMER:—Having recently visited Melrose (the place chosen by the St. Louis Vine and Fruit Growers' Association for the field of their labors) for the purpose of informing myself personally what was being done in the Horticultural line, and knowing the interest you take in such matters, iudependent of your being a member of the Association, I have the pleasure of informing you in a general way of what I have seen.

Melrose is situated in Meramac Township, St. Louis county, and is on the line of a county road running from Glencoe on the Pacific R. R. to St. Albans, a steamboat landing on the Missouri, and is about the distance of three miles from the latter and six from the former place. As you approach the place from either direction, you will see on each side of the road and considerably in the distance straight rows of stakes running in every direction, as well upon the steepest hillside as on the gentle declivity, and the stranger would naturally ask himself, for what purpose and with such regularity have they been planted there? He would perhaps answer the question for himself, as I did, by examining what they were there for. To my surprise on doing so, I found growing alongside of every stake a grape vine; and knowing the unparalleled drought they had to endure upon these dry flinty hills, I began to wonder at the success of the planting; for look where you would, with an occasional exception amounting to perhaps five or ten per cent., you might see each stake accompanied by its grape vine. Regaining the road, I continued my way onward for perhaps the distance of three-quarters of a mile from where I first met the stakes, when I perceived what I thought must be the residence of Charles H. Haven, the originator and Secretary of the Association. In this I was not disappointed, for on looking over the grounds immediately surrounding the residence I perceived Mr. Haven himself in company with two other gentlemen, apparently showing what could be done in such localities.

Entering the grounds I readily concluded that the proprietor had at some former period paid considerable attention to ornamental planting, and I saw some fine specimens of the Am. Arbor, Vitæ and White Pine. By this time being met by Mr. Haven and his visitors, I was cordially welcomed and invited to take a walk with them over the grounds. I will here remark that these two gentlemen accompanying Mr. Haven, were with him for the purpose of obtaining information as to the practicability of growing grapes and fruit with success on the highlands of the State, they having heard that such an Association as the St. Louis Vine and Fruit Growers' had located themselves at Melrose for the purpose not only of making money for themselves, but also of establishing by successfully cultivating, as an example, an extensive section of these vine lands. He told them in these words, that the hill lands which they now saw were no better than millions of acres to be found south and west of St. Louis, and that the Association had no other object in view than the showing up to the country at large beyond denial the immense capabilities of these lands to produce grapes and the various fruits in abundance. He stated that the Association had no lands to sell, and that therefore no party or parties could attribute to them other than generous motives in undertaking to have on exhibition a specimen vineyard which could be visited by all parties desiring information, as an example of what the rest of the uplands of Missouri are fitted for. In the fruit line there is plenty here. Apples, pears, peaches, grapes, and even domestic plums as fine as I ever saw. There are in bearing some twelve hundred vines, principally Catawba, with a few Isabellas; the latter seem to do but poorly, while the former will average more than two to five pounds to the vine. They are in a healthy condition and are from five to six years old. Of the peaches there were the following: Gross Mignonne, Favorite, Morris White, Late Admirable, and many with which I was unacquainted. There is a fine specimen Bartlett on dwarf stock, bearing about a bushel and a half of fine pears; also an Onondaga; but what pleased me most was a Des Nones, two years transplanted, that had on thirteen large specimens. The fruit trees in general looked well, and are in a fine growing condition. They are trained with low branching heads, and it is astonishing to see the size which they have attained since planted, and all this upon hills which until lately were almost considered worthless. Mr. Haven told me that the Association had now under fence ninety acres, sixty of which were planted to the Catawba grape, and a great deal of the remainder to the various other fruits. These

hills are high, precipitious, and in most instances rocky. Into these at the distance of ten feet apart are small holes dug or picked out, as the case may be, as the ground admits or not the use of the spade, and in each of these is a vine planted; and, strange to me, they have made in many instances what would have been a fine growth for any soil. Taking the season and the many other difficulties which there were to contend with, Mr. Haven has succeeded admirably, and thanks are due him from the horticultural public for showing how, by perseverance and labor, they can obtain the like results. From the Association something more than this is due for the successful manner in which he has managed their affairs. If this should have no other effect than causing yourself or some other person prominent in horticultural affairs to visit the grounds of the Association, thereby enabling you to judge things as they are and to do justice to such an undertaking, which I feel I am unable to do, I should feel I had done a public good. I would say to all thinking about to engage in the cultivation of the grape in the uplands of the State, and to all others in anywise engaged in horticultural pursuits, that a visit to the grounds of the Association, would prove both pleasant and instructive. Persons desirous of so doing can reach Glencoe, twenty-six miles from St. Louis, by Pacific Railroad, at four different times during the day. M. W. Manning.

Saving Flower Seeds.—Many of our perennial and annual flowers are now ripening their seeds, and it is often desirable to save some, especially if the plant is a rare or choice one. Seeds should be gathered when dry. Dew or rain should always be allowed to evaporate previous to collecting seeds of any kind.

Have a number of small paper bags prepared, large enough to contain as much of any sort as you desire to save, and on which the name can be distinctly written with ink. When the seed-vessel is not of a fleshy consistence when ripe, the seeds will seldom need any drying, and if you are not particular about bulk, they will keep better if left in a seed-vessel.

If the capsule is fleshy, the seed must be separated, as it would decay and mould, probably killing the seed. In drying seeds, they should not be exposed to the rays of the sun, but be placed in a dry, airy, shed.

Previous to putting in the paper bags, write the name legibly. This will save some disagreeable mistakes next spring. Keep the seeds during the fall and winter in a dry apartment of an even temperature. Great changes, from heat to cold, are always hurtful to seeds, and should be avoided, if possible, yet some seeds will withstand almost any degree of cold.

If the air in the room is moist, the seeds will either begin to vegetate, or else mold, and either will be fatal to your chance of raising plants. Too much heat dries up the seed, and thus deprives it of life.

Some seeds keep well a great many years, but generally they do best when sown the next season, and some must be put in the ground immediately after ripening. This is the case with several tree and fruit seeds. Balsam seed is better if kept for several years, the young plants are more sure to come double.

KEEPING PEARS.

The pear is a peculiar fruit in one respect, which should always be kept in mind, viz: that most varieties are much finer in flavor if picked from the tree, and ripened in the house, than if allowed to become fully matured on the tree. There are a few exceptions to this rule, but they are very few. And, on the other hand, we know a great many varieties which are only second or third rate, when ripened on the tree, but possess the highest and richest flavor if gathered at the proper time, and allowed to mature in the house. This proper season is easily known, first, by the ripening of a few full grown, but worm-eaten specimens, which fall soonest from the tree; and, secondly, by the change of color, and the readiness of the stalk to part from its branch, on gently raising the fruit. The fruit should then be gathered—or so much of the crop as appears sufficiently matured—and spread out on shelves in the fruit room or upon the floor of the garret. Here it will gradually assume its full color, and become deliciously melting and luscious. Many sorts which, ripened in the sun and open air, are rather dry; when ripened within doors are most abundantly melting and juicy. They will also last for a considerably longer period, if ripened in this way—maturing gradually as wanted for use—and being thus beyond the risk of loss or injury by violent storms or high winds.

Winter dessert pears should be allowed to hang on the tree as long as possible, until the nights become frosty. They should then be wrapped separately in paper, packed in kegs, barrels or small boxes, and placed in a cool, dry room, free from frost. Some varieties, as the D'Aremberg, will ripen finely with no other care than placing them in barrels in the cellar, like apples. But most kinds of the finer winter dessert pears, should be brought into a warm apartment for a couple of weeks before their usual season of maturity. They should be kept covered to prevent shriveling. Many sorts that are comparatively tough if ripened in a cold apartment, become very melting, buttery and juicy, when allowed to mature in a room kept at the temperature of 60 or 70 degrees.—[*Downing.*

Gathering and Keeping Apples.—In order to secure soundness and preservation, it is indispensably necessary that the fruit should be gathered by hand. For winter fruit the gathering is delayed as long as possible, avoiding severe frosts, and the most successful practice with our extensive orchardists is to place the good fruit directly, in a careful manner, in new, tight flour barrels, as soon as gathered from the tree. These barrels should be gently shaken while filling, and the head closely pressed in; they are then placed in a cool shady exposure under a shed open to the air, or on the north side of a building, protected by a covering of boards over the top, where they remain for a fortnight, or

until the cold becomes too severe, when they are carefully transferred to a cool dry cellar, in which air can be admitted occasionally in brisk weather.

A cellar for this purpose, should be dug in dry gravelly or sandy soil, with, if possible, a slope to the north; or, at any rate, with openings on the north side for the admission of air very rarely in weather not excessively cold. Here the barrels should be placed on tiers on their sides, and the cellar should be kept as dark as possible. In such a cellar, one of the largest apple growers in Dutchess county is able to keep the Greening apple, which, in the fruit room, usually decays in January, until the first of April, in the freshest and finest condition. Some persons place a layer of clean rye straw between every layer of apples, when packing them in barrels.—[*Downing.*

The Apiary.

HINTS FOR THE MONTH.

BY J. W. QUINBY.

After the supply of honey is cut off in the fall, bees are greatly inclined to rob. See "Valley Farmer" for March for directions in such cases. Better not allow them to begin however. Look them over early and decide which you will keep through the winter. A good hive for wintering will, in the first place, be healthy. Examine for foul brood, for some may have previously escaped your notice; but if any now exists you will easily detect it, all the healthy brood having matured and issued from the cells In the next place, a hive fit for winter will have plenty of honey. It is said that fourteen pounds is sufficient to carry a colony through this season, but it is not safe to depend on less than twenty-five. The amount of honey can be ascertained with sufficient accuracy by subtracting from the gross weight the weight of an empty hive, adding to it four or five pounds for that of the bees, empty combs, and so forth. If the combs are old they may be a little heavier in consequence, but should not be broken out on that account. They will no doubt answer every purpose so long as they are kept clean and free from mold, even to six, eight or ten years. It is well to break out moldy pieces. Some say old combs should be broken out because the cells become so filled with cocoons of which every young bee leaves one, that the larva has insufficient space to develop in, and the race is dwarfed in consequence. Such persons must have nice perceptions. A hive for winter must have a large swarm of bees. This is very important. To ascertain the point examine it some cool morning by tipping it down on one side, and looking in. The bees will be quite compact if the air is cold, but should be seen between nearly all the combs. If there are but few in a healthy hive at this season, the scarcity is probably from the old age or disease of the queen. In such cases drive them out, shake them upon a sheet in front, watch them as they return, single out the queen and destroy her. Now you may unite another weak swarm with them if you have it, and thus of both make one strong one. But in putting bees together in this way you must take some measure to prevent them from fighting. Tobacco smoke thoroughly applied will sometimes be sufficient; but a better method is to take the common puff-ball. Having dried it, set it burning with a coal, put it in a fumigator, and blow the smoke among the bees you intend to unite. In a few minutes they will drop down as if dead, and while in this state they may be put together without much danger of their fighting afterward. In the course of thirty or forty minutes they will revive and appear as lively as before. They should be confined an hour or two after the air is admitted. You can easily make the fumigator just mentioned by taking an old powder canister, if nothing better is at hand, knocking out both ends, and fitting a wooden plug with a small hole through the middle, into each. Let it be made in such a manner that when you wish to operate, you may remove one of the plugs, put in the burning puff-ball, replace it, and applying one end of the instrument to a hole in the hive, force in the smoke by blowing at the other.

Often good hives in other respects, lack honey. If a little feeding will supply the deficiency, it may be best to do it. I said there ought to be twenty-five pounds in each hive to commence the winter with, but probably some less would do in the Western and South-Western States. For directions for feeding, see April Number of the "Farmer." Pure honey is the best article that can be fed; that which is commonly called Southern honey will answer. For this purpose it ought to be boiled, adding a little water to prevent burning, and the scum taken off. In the absence of anything better, a syrup made of common white or brown sugar dissolved in water, may be used; but this is somewhat objectionable from its tendency to harden in the cells. The movable-frame hives are very convenient where there is much feeding to be done. Nothing is easier than to transfer frames loaded with honey from those that can easily spare them to the needy ones. But do not try to winter too many. Those who have but few hives and are anxious to increase their stock are apt to err in this respect. It is no disadvantage to take the bees out of a hive a little too light for winter, in the manner above described, and save it over until another year to receive a new swarm. It don't take much arithmetic to show that a hive half full of combs and honey when a swarm is put into it the following summer, will be filled in much less time than an empty one would. To keep such through the winter, first get the bees out with puff-ball, or suffocate them with burning sulphur. But it is barbarous to kill bees when it is possible to dispose of them any other way. The notion that many have that bees will not remain in a hive after it has been smoked with sulphur is utterly unfounded. They have been put in such a hive within thirty hours from the time of smoking it without manifesting any dislike to its significant odor. Set the hives mentioned above in a cold place, handling carefully, for new combs are very tender, and close up all the holes to keep out vermin; then let them stand right end up until the next swarming season.

St. Johnsville, 1860.

Importation of Stingless Bees.—Mr. A. O. Moore, of New York, who went to Central America, last year, has just returned from Guatemala, and has brought with him two swarms of the stingless bees common to that country.

These bees are of two varieties, one large and one small, and both quite different in their habits from the honey bees common to us. For one thing, there appears to be but two classes—workers and queens. The largest class are about the size of our common bees, the queen being much larger, and while laying eggs appears very clumsy, and unable to fly. The honey is deposited in egg-shaped capsules, more than half the size of hen's eggs, fastened to a plate of wax only or one side, and sometimes ranged quite horizontal in tiers one above another. The honey is considered particularly delicious, but is not stored in as great quantities as with our bees. The hive most commonly consists of a hollow log, and that is hung up in the hut that shelters the family, or at the door, under the projecting thatch of the roof.

The Young Mother's Lesson.

BY T. S. ARTHUR.

"You look sober, Bella. What's the matter?"

The remark and question came from Aunt Rachel, who had called to spend an afternoon, and take tea with her niece.

"I feel sober, just at this time, aunt."

"No unusual cause for uncomfortable feelings, I hope," said Aunt Rachel, the pleasant light which had come into her face beginning gradually to fade away.

"Oh, no; nothing unusual. It's the old story with me. There are very few days, now, in which I am not disturbed, or made to feel unhappy."

"Why, Bella! This is strange news. Disturbed and made to feel unhappy every day! You pain me by such an acknowledgement.—What has gone wrong with you?"

"Nothing wrong with myself, aunt," was replied; "but that oldest boy of mine is growing so self-willed, disobedient and ungovernable, that I'm half in despair about him."

"I'm sorry for that, Bella. Perhaps you have indulged and humored him too much."

"I think not. From the very beginning I have made it a rule to repress, as far as lay in my power, everything disorderly and evil; to require strict obedience to my word on pain of certain punishment. No, aunt, I do not think the fault lies at my door. Edward has a strange disposition. I don't know what to make of him, sometimes. He seems bent on doing the things I interdict. Only half an hour ago I found him in the library, with a handsome book lying upon the floor, marking some of the fine illustrations with a pencil. Once before I had punished him for the very thing, and here it was again!"

"And you punished him again?"

"I did; and severely."

"Where is he?"

"Shut in a room by himself."

"Overhead?"

"Yes, that's him pounding on the floor now. Just hear what a noise he is making! And it isn't ten minutes since I threatened to whip him if he did it again."

Bella went hastily from the room, and going half way up stairs called in a sharp, commanding voice—

"You, Edward!"

The hammering ceased in an instant.

"What did I say to you about that noise a little while ago?"

No answer.

"Edward!" There was no kindness, no softness, no mother-love in the voice that uttered the name. "Do you hear, sir?"

Still no response.

"Why don't you answer me?"

The mother was growing excited.

"Edward; if you don't answer me I'll punish you severely."

A sulky muttering now came from the room.

"Don't let me hear that noise again, sir, or you'll be sorry for it!

"Can't I come out, mother? I'm tired of staying here?"

"No, sir; you can't come out, you naughty boy!"

"I will come out," screamed the child, with a sudden wildness of manner, as if he had grown desperate; and he rattled the lock, and kicked passionately against the door. This was more than the excited mother could endure. Springing up stairs, she unlocked the door, and entered the prison room. Aunt Rachel sighed as she heard rapidly falling strokes, and the cries of Edward.

"You see," said Bella, as she returned with a flushed face and angry looking eyes, to the sitting room, "what trouble I've got before me."

Aunt Rachel did not reply.

"I've never seen just such a child," the young mother continued; "and I don't know what is going to become of him. He prefers wrong to right always—and recognizes authority for the sake of disobedience. If, in sending him from the room in consequence of some misdemeanor, I tell him to go up stairs, he will, almost surely, go down; if I have said go down, he will go up. Always, he is desirous to gain the interdicted object. It is marvelous, this perversion of his mind. You don't know how it distresses me. There! Just listen. He's pounding on the floor again, as I live! And, what is more, he will keep at it, in spite of threat or punishment. Now, what am I to do with such a boy, Aunt Rachel? I've tried everything, but it's of no use."

"Suppose, Bella, you let him come down and see me. Maybe that will get him out of his present unhappy state of mind."

"But, aunt," objected the mother, "don't you see that he would then consider himself as having triumphed."

"I'm not sure that he would think anything about it. He would come into a better state of mind than the one that is now ruling him; and this, it seems to me, would be something gained. It is in the sunshine that good affections grow, not in storm and darkness."

Bella sat reflecting for some time. She did not like the thought of yielding to her rebellious child in the smallest degree. Pride, and love of rule, influenced her as much as a sense of duty—perhaps a little more. In giving up, she felt that she must experience a dsgree of humiliation.

"Forgive him, this time, for my sake," urged

Aunt Rachel. "I shall not enjoy my visit if he is under punishment all the afternoon."

After a further debate with herself, the mother left the room and went up to her imprisoned boy. He was pounding on the floor when she turned the key and entered.

"Edward!" She spoke sternly.

The little fellow started up, with a look half tearful, half defiant.

"You are a very naughty boy!"

Edward set his lips firmly, and knit his fair young brows.

"How dare you pound on the floor after I had forbidden it?"

Edward moved back a step or two. There was danger in his mother's eyes.

"Why don't you answer me when I speak?"

"Couldn't help it" stammered the child,

"Couldn't help it! Aint you afraid to give me such an answer?" And a hand moved, half involuntarily, as if a blow was about to follow.

"Aunt Rachel is down stairs."

"Oh, is she!" Two little hands came together with a sound like a kiss; and waves of sunshine swept suddenly over a face that was dark and stormy a moment before.

"I've a great mind not to let you see her, after all this naughty behavior."

The mother could not forgive him. Instantly the smile went out from Edward's face, but he looked neither penitent nor deprecating. She turned from him as though she would leave him in prison; but there was no sign of weakness—only the disfiguring scowl on his face that made it so painful to look upon.

"Come." The mother coldly extended her hand. Edward advanced toward her with slow steps, and giving his hand in a reluctant manner, as if there were no pleasure for him in the touch, followed, half behind her, down into the sitting room.

"Here's that naughty boy!" This was Edward's introduction to his mother's aunt. "Now, don't pout your lips after that fashion!" was added, reprovingly. "Kiss Aunt Rachel."

Edward wanted to throw his arms about Aunt Rachel's neck and kiss her to his heart's content; but the reproof and command sent an evil spirit of resistance into him, and he merely put up his lips with an air which said for his mother, who did not see his face—"I don't want to kiss her"—but Aunt Rachel saw love in his eyes.

"If you can't behave better than that, you'd better go up stairs again."

"Oh, he's behaving nicely," said Aunt Rachel, as she drew an arm around the boy, and then she began to talk to him in a way that soon commanded all his attention. But his mother would give him no peace. It was—

"Don't ride on your aunt in that way;" or

"Just see there, you rude fellow, your feet are on Aunt Rachel's dress;" or—

"Don't twist your shoulders so!" or—

"You'd better go away from Aunt Rachel; you are annoying her."

"Not in the least," Aunt Rachel replied to this, drawing her loving arm close about the pleased child, in whose bright young face she read a whole volume of golden promise, if there were only a wise hand to turn the leaves.

"But, half an hour did not pass before Edward and his mother came into direct collision, and he was sent in disgrace from the room.

"Now what am I to do, Aunt Rachel?" said the mother; in a half despairing voice, "You see what a self-willed, disobedient, reckless boy he is. How he resists me in everything. What *am* I to do?"

"Learn the first lesson in governing others," replied Aunt Rachel, with considerable gravity of manner.

"What is that?" asked her niece.

"To govern yourself."

"Aunt Rachel!"

"I mean just what I say. And until you learn to do this you will strive in vain with your child. Anger wakens anger; harshness naturally produces antagonism; oft repeated punishments, and for trivial offences, are the parents of rebellion—but love, Bella quickens love into life. There is more true power for good in the tender, sympathetic tones of a mother, warm with mother love, than in her most imperative command or sternest interdiction. Her mission is to lead, not to drive her children in the right way."

Aunt Rachel paused to note the effects of her plainly-spoken admonition. Her niece had a startled look, but she made no reply.

"I have not heard you speak a single kind approving word to that boy since I have been here," resumed Aunt Rachel.

"How can I speak approvingly when he does wrong? How can I encourage him to disobedience by smiling when he sets my commands at defiance?"

"I fear, Bella, that you call many things wrong that are done innocently on his part. You follow him up too closely, or scold him too much for things trivial, or of no account. You have not once that I have seen, this afternoon, tried to divert him from anything that he was doing not strictly in the line of your approval; it was always a command, and harshly made. Forgive me, Bella, for this plain speech: but I see your error so plainly, that I must point it out. You have forgotten the pithy adage about honey catching more flies than vinegar. Try the honey, my dear—try the honey! I am sadly afraid that you are shadowing the life of that child—shutting out the sunshine by which alone good plants can vegetate in the garden of his soul. I have seen little besides an evil growth to-day; yet down among the rankly springing weeds, trying to struggle up into the air and light, a few flowers of affection were faintly visible. Oh, Bella, search for these as for precious treasures; water them with the dews of love, and let the heart's warm sunshine go down into the earth around them. Don't think so much about the repression and extermination of evil, as about the growth and development of good. But, first of all, put your own house in order. Regulate your own heart. Repress anger, pride, self-will, love of ruling, indignation at rebellion—let only affection reign in your

heart, and thoughts of your child's good fill your mind."

Bella sat in a kind of bewildering silence, and her aunt kept on—

"Will you not act on my suggestion?" Go to Edward, and speak to him as if you loved him. Let him feel the love in your voice, see it in your eyes; and, as the magnet attracts iron, so will you attract him. Forget that he has offended you, or, if you think of it, and speak of it, let it be as though you were grieved, not angry. Love for his mother will bind him to the law of obedience when fear of punishment would only impel him to its violation."

Bella arose quickly. She looked into her aunt's face, but made no response. Tears were in her eyes as she left the apartment. Going up stairs to the room into which Edward had been banished, she opened the door and went in with a quiet step. The boy started as she entered, and looked around from his work of marking with a pencil on the white window sash. He was doing wrong, and being caught in the act, expected punishment or an angry lecture. So he put on a look of defiance. But his mother, instead of blazing out upon him, as was her wont, sat down in a strange, quiet way, and said, "Edward," so softly and gently that he could only stand and look at her in surprise.

"Edward," she repeated his name, and now with a tenderness that made his heart leap. Her hands were held out toward him. Dropping the pencil, he advanced a step or two, looking wonderfully at his mother. She still held out her hand. "Come, dear." He was by her side in an instant,

"Do you love mother?" An arm was drawn gently around him. He did not answer in words, but put his arm around her neck and kissed her. What a thrill of pleasure went trembling to her heart.

"I love Eddy." The little arms tightened about her neck, and the little head went down nestling upon her bosom.

"Oh! I love you so much!" The half smothered voice was full of childish earnestness.

"Will Eddy be good for mother?"

"I won't never be naughty again!" Edward stood up, speaking in a resolute way, and looking full into his mother's face. "I can't help it," he added, a little less confidently.

"Oh, Eddy can help it if he will," said his mother, smiling encouragement into his face.

Something was on the lip of the boy, but he kept it back from utterance.

"What is it dear? What were you going to say?

Thus encouraged, Edward said, dropping his eyes as he spoke—

"I'll forget sometimes; I'm most sure I will. But———"

He paused with the sentence unfinished.

"But what dear?"

"Don't scold me then, mamma. Kiss me, and I'll be so sorry."

He caught his breath with a sob, and his mother drew his head against her bosom, and laid her tearful face down among his golden curls.

When they entered the sitting room Aunt Rachel saw that it was all right with them. She held out her hand to Edward, who came to her in a gentle way, and stood, with a happy looking face, by her side.

Scarcely within her memory had the mother spent so pleasant an afternoon. Edward, of course, soon forgot himself, soon meddled with forbidden things, made unseemly noises, or conducted himself in a way that tried severely his mother's patience. But she compelled herself, and it required no little effort, to use honey instead of vinegar—to speak in affectionate remonstrance instead of with angry threats—and, instantly the troubled waters grew still. She could not but notice the singular difference in effect, between the loud, emphatic commanding utterances in which she had so long indulged, and the quiet, loving words, now spoken in undertones. Will then opposed itself to will; but now love yielded to love. The boy, once so indifferent and rebellious, was now anxious to gain his mother's approval. She had governed herself, and the work of governing her child, so impossible before, became a thing of easiest achievement.

"Don't forget it, dear," said Aunt Rachel, as she held the hand of her niece, in parting at the close of her visit.

"Never!" was the earnest reply. "You have removed scales from my eyes; and selfishness, self-will, and passion shall never blind me again. I will try to govern myself always—before attempting to govern my child—try to see what is for his good—try to stimulate the growth of loving affections, rather than give all thoughts to the weeds, in seeking to tear up which I have already hurt so many tender plants."

"Ah, my child, that is the true way," replied Aunt Rachel. "If you can get the life forces of his young spirit to flow vigorously into the good plants, they will soon spring up into the sunny air, spreading out their branches, and striking their roots wide and deep into the earth—leaving the evil plants to droop and wither for lack of nourishment."

How to Live Well.—Good meals at moderate intervals, and the stomach left to rest between. Some interval—an interval of active exercise—is best between books and food. A leisure hour for dinner, and cheerful conversation after it. A short nap, for those who need or like it after dinner. Light occupation in the evening—literature, or correspondence, with more or less social intercourse, music, or other recreation, are each and all highly desirable; but the most indispensable of all is strenuous and various exercise.—[Miss Martineau.

The "Medical Times," in referring to the many melancholy accidents from dresses taking fire, says:—"The light fabrics manufactured for ladies' dresses must be made blaze-proof. Nothing can be more simple. The most delicate cambric handkerchief, or fleecy gauze, or the finest lace may, by soaking in a weak solution of chloride of zinc, be so protected from blaze that if held in the flame of a candle they may be reduced to tinder without blazing. Dresses so prepared might be burnt by accident without the other garments worn by the lady being injured.

Editor's Table.

READ THIS.

We will send the Valley Farmer from this time to January, 1862, for One Dollar, to single subscribers, and to those who are forming clubs for Eighty Cents. We hope this liberal and losing offer to us, will be responded to by hundreds and thousands from all parts of the Great Valley. We make the offer at this time hoping our present subscribers will endeavor to procure large lists at the Fairs in their vicinity. The leading farmers of the county will be there congregated, and a word or two spoken to them in the right spirit will induce them to become patrons.

Recollect, that all subscribers hereafter sent will be included in the lists for Premiums, to be offered by us for the largest lists sent for 1861. We will send the back numbers for 1860 to any one for fifty cents. We are determined that high terms, at least, shall not prevent any one from subscribing.

☞ Nelson County (Ky.) Agricultural Society.—The Secretary of this Society, Wm. Johnson, Esq. will accept our thanks for a list of the Officers of that Society. The Premium List he sent us did not come to hand, and we could not give the time of holding the Fair.

Death of Obed Hussey.—We are pained to announce the untimely death of this estimable man, which occurred on the 4th of August, at Exeter, N.H. while attempting to return to the cars on the railroad, after stopping a few minutes for refreshments, having been delayed at the request of a female stranger in procuring her and her child a glass of water. In his attempt to regain the cars, they started, and he was thrown under the wheels and instantly killed. Mr. Hussey was one of the first inventors of the Mowing and Reaping Machine, and after a long series of years of toil and disappointment incident to the life of a real inventor, he has been cut off in the midst of his usefulness, and just at a time, too, when he seemed as if prepared to enjoy the fruits of his great labor.

Subscribers at the Fairs.—Who, among our good friends, will get up the largest list of subscribers at our Fairs. Who will procure a dozen or twenty subscribers!! Let every friend of our paper try to send that number. Subscribers for 1861 can now have the remaining numbers of this year free.—Think of that! the "Valley Farmer" from now to January, 1862, for One Dollar, or in clubs for Eighty Cents for that time. This is below the actual cost of the work, but we are willing to make every sacrifice we are able to for the dissemination of agricultural intelligence, and for the improvement of our agriculture. Friends, we look to you to second our efforts.

J. C. W. of Elkton, Ky., inquires the price of Beaumont's Improved Metallic Barometers, described in the "Valley Farmer," some time since. The price at the factory is $5. They are now for sale in many of the cities and towns in the United States by dealers in such instruments, probably at prices not to exceed $6 00.

Farming in the Connecticut River Valley.

We recently made a hasty run along the Connecticut river by steamer and by railroad, through portions of Connecticut, Massachusetts and Vermont. From Middletown, up for one or two hundred miles, the lands along this stream are highly productive; and interspersed as the country is within short distances with thriving manufacturing towns and villages, the whole country presents the appearance of the greatest degree of thrift, prosperity and happiness. At Hartford, Col. Colt, the great manufacturer of fire arms is also engaged in several important enterprises connected with the culture of the soil. On the Hartford side of the river he is still extending the embankments of sufficient hight to be above the highest freshets. The embankments are thickly planted with willows to secure them from washing. The willows are of the best kinds for manufacturing the various articles of willow ware. The quantity thus grown, besides answering the purpose of securing the permanence of the embankment gives employment to one hundred hands in the basket factory, and this number will be increased when the work is completed. The lands thus inclosed are chiefly planted with tobacco. On the opposite side of the river Col. Colt has a large inclosure (the number of acres we could not determine in passing) devoted to poultry raising under the management of a competent person whose exclusive business it is to see to them.

A kindred enterprise of no small importance receives a share of the attention of the persevering inventor, and we are informed promises complete success. We allude to artificial fish breeding, chiefly brook trout. The country generally abounds with so many natural streams that with a little labor may be rendered highly productive of the choicest of fish, that we intend at some future time to make a special visit to Col. Colt's establishment for the benefit of our readers.

The culture of tobacco is constantly increasing throughout this valley, even as far north as Vermont. The crop the present season looks remarkably promising. The care and management bestowed on this crop would afford profitable lessons to the growers of the weed in the Western and Southern States. The tobacco is not grown as with us upon new land, but upon that which has been under cultivation for probably a hundred years, and yet for luxuriance of growth and uniformity in the plants we have never seen equalled in the fields of the best Virginia or Kentucky planters, but in the absence of virgin soil, manures most appropriate to the crop and the special requirements of the soil are applied in profusion, and it is to these and the care in cultivation that render this crop so profitable as to afford encouragement for its culture in the place of the actual necessary products for a thriving population.

The grain crops throughout this entire section of country have yielded an unusual harvest, and corn and potatoes bid fair to equal any of the crops of any former year; all kinds of fruits are unusually abundant, the crop of apples exceeds any former one within the last dozen years.

Land draining is fast gaining favor with the farmers; the experiments that have been made have fully demonstrated its importance and have caused numerous drain tile manufactories to be established along the line of the railroads and at other places.

While in some other portions of the country, and particularly in the West and South-west unexampled drought has prevailed, all the sections of the country we have here visited, the showers have been frequent and abundant, indeed it rained every day during our travels, the clouds would seem to gather in an hour and pour forth their contents in such refreshing showers that one could no longer doubt that hills, mountains and forests are essential for the production of rain in the growing season, and that it is only the absence of these on the great prairies of the West that

cause these periods of excessive drought and almost threaten entire districts with famine.

If men cannot rear mountains they can plant trees where nature has withheld them. Every quarter section of prairies should have at least twenty-five acres planted in the best kinds of timber trees. These will not only add to the health of the land and invite the summer showers, but add to the value of the farm in the product of useful timber.

JAUNT TO QUINCY.—We recently paid a flying visit to Quincy, Ill. By the politeness of Capt. A. Phillips, a warm friend of agriculture, we were favored with a pass on one of the Keokuk Packet Co.'s boats, and had a most pleasant trip. This is one of the best lines of boats we ever traveled on, and this is the testimony of all who have tried them.

We visited the Nursery of J. H. Stewart, and found it in fine condition, and its proprietor perfectly at home among his flowers and trees.

We next visited our friend K. K. Jones, and found him laudably engaged in picking some of his fine fruit to send to his aged parents. What a pleasure it is to have fruit, and especially for such a purpose—and how much better the fruit will taste when it comes from the orchard of a dearly loved son! Our friend has the best selected, and, we will add, the best managed orchard of apple trees that we have ever visited. Friend K. K., the readers of the "Valley Farmer" will thank you for an article on the management of an orchard. Tell them how you train and cultivate your trees.

We next visited the Greenhouse and Flower Garden of ——(we have forgotten the name). We found him busily engaged in his labor of love, cultivating his floral beauties.

We should not omit to state that we saw miles of Osage Orange Hedge, the fields having no other protection, and needing none, making the very best barrier against stock of all kinds even to pigs, that could be desired This hedge only confirms what we have frequently before stated, that the Maclura or Osage Orange is capable of forming a most perfect hedge; but not one man in twenty will ever bestow the necessary attention to it, to obtain success.

The land back of Quincy is rich, and offers beautiful sites for country residences. Fruit of all kinds adapted to a temperate climate succeeds admirably here, except the peach.

FAIR AT HERMAN.—The Exhibition of Fruits at Herman, on the 5th and 6th ult., was highly creditable. We have never seen a finer display of grapes, and all kinds of fruit were shown in great perfection.

Messrs. Husman & Manwaring exhibited 35 varieties of Grapes; M. Poeschel, upwards of 20 varieties; and Mr. Withrich, F. Noe and others, fine collections. Such a display has never before been seen in Missouri. The exhibitors of Herman are deserving of great praise for their enterprise. Many kinds of wine were tested, and most of it pronounced of excellent quality. The vineyards of Messrs. Husman & Manwaring, F. Noe, and Jacob Rommel, were visited by the members of the Missouri Fruit Growers' Association in a body. At the latter place, the members were favored with the famed Norton's Virginia Wine, which was pronounced superior. The Grape crop of Herman is immense this year. The mildew and rot have not appeared there this season. A report of the proceedings of the Fruit Growers' Association will be found in the present No.

The Farmers' Convention.

We learn from the Committee of the Meramec Horticultural Society, whose Circular we herewith append, that the responses thus far have been very favorable, and nearly all the county societies heard from have elected delegates. We are glad to learn that the farmers throughout the State are responding so promptly. There is no doubt, from present appearances, that the Convention will be held, and that it will be an interesting occasion to all; none the less so on account of the unfavorable season which has been experienced in many portions of our State. The occurrence of such unusual seasons only shows more strongly the necessity of combining our wisdom and experience for the purpose of devising measures for agricultural improvement. Doubtless all contingencies of the weather result in the farmer's benefit rather than otherwise, if he is properly prepared to meet them. In our next number we shall have something more to say about the drought—its benefits, and the lessons to be learnt from it.

"BOARD OF AGRICULTURE FOR MISSOURI—FARMERS' CONVENTION.—'Whereas, the policy of aiding and encouraging agricultural progress and improvement by means of State appropriations, and the establishment of State Boards of Agriculture, has been adopted in most of the States of the Union—in many tested for a score of years—and has been found, without exception, to be in the highest degree judicious and profitable; Therefore:

'RESOLVED, That a Committee of three members of this Society be appointed to prepare a circular, calling attention to the importance of taking steps for the formation, at an early date, of a State Board of Agriculture, and for urging the passage of an act by the next Legislature for the advancement of agriculture; and to send a copy to every Agricultural and Horticultural Society, and every newspaper in the State, requesting such action and co-operation as the importance of the subject demands.

'At the regular monthly meeting of the Meramec Horticultural Society, held at Allenton, St. Louis county, Mo., August 2nd, 1860, the above Preamble and Resolution were unanimously adopted, and Dr. L. D. Morse, Dr. A. W. McPherson, and Mr. T. R. Allen appointed the Committee.

WILLIAM MUIR, Secretary.'

"The Committee, appointed as above, deem the fact set forth in the Preamble so patent and forcible as to render it unnecessary to add much by way of calling attention to the importance of immediate action in the matter. Public men are ever ready to admit that Agriculture is the basis of our prosperity—that it is intimately connected with the prosperity of all other branches of business. They are ever ready to bestow idle praise upon honest productive industry; but something more than empty commendation is needed. It is the duty of society to encourage and promote the discoveries and developments of science as connected with rural pursuits, and to spread the results thus attained among the mass of practical farmers. Science is but another name for knowledge.

"It is a stubborn fact that our cultivated lands, generally, are deteriorating in productiveness. It is doubtless a fact, that the same amount of labor now employed in agriculture, would produce one-third more were it judiciously employed. It is mainly because the intellect employed in such pursuits is less developed, or less educated for the purpose, than the mind devoted to professional or other occupations, that agricultural labor is so poorly rewarded. Hence, the judiciousness cannot be doubted of a State expenditure for the instruction of the producing classes in regard

to the best manner of applying their means and honest toil, and of keeping and enjoying the proceeds. Such expenditure would soon be more than amply repaid by the increased prosperity of the State, and a large proportion of our growing taxes for the support of the poor and the punishment of crime would cease forever.

"Many of our sister States have accomplished much for agricultural improvement through their State Boards of Agriculture. Several of them have, and others are about establishing, Agricultural Colleges and Experimental Farms for the better education of the rural classes. Such facts accuse us of being behind the age. The natural advantages of our State are eminently superior. It is clearly our duty as good citizens, not only to see that our rich domain is not squandered by improvident tillage, but also to put forth our best exertions for the ample development of all our resources, and particularly for the improvement of that branch of industry in which the mass of the people are engaged and which we must recognize as the foundation of our prosperity.

"We say, then, let us have a grand Farmer's Convention for the purpose of taking into consideration such measures as may be suggested for the better accomplishment of the objects here indicated.

"We suggest that each and every Agricultural and Horticultural Society in the State appoint one or more delegates to attend such a Convention to be held in the city of Jefferson, at or about the time of the opening of the next session of the Legislature, and that all farmers and others interested be invited to attend and co-operate.

"Societies and individuals who will respond favorably or otherwise to this suggestion are invited to communicate the same as early as possible to the Chairman of this Committee, so that the result may be published and a call issued for a convention, if thought advisable.

L. D. Morse,
A. W. McPherson.
"Allenton, Mo. Aug. 16, '60. T. R. Allen.

Selecting Seed Corn.—In breeding stock, most farmers—all good farmers—select the most perfect animals, those possessing most nearly the desirable points which they wish to perpetuate in their offspring, because it is an established fact that in breeding animals like begets like. The same law holds equally good in the vegetable kingdom. A large proportion of farmers pay but little or no regard to selecting their seed grain beyond an effort, perhaps, to secure the best varieties, seldom SELECTING THE BEST STALKS, HEADS AND EARS. In a field of corn there is a great difference in the stalks, ears, and productiveness; some of these are characteristic and may be perpetuated. In careless culture, as well as in breeding, there is a tendency in nature to deteriorate, hence it is important to select the best corn for seed, making choice of the seed in the field before the corn is cut, when the habit of the plant can be seen—stalks that yield the fairest ears, the most grain in proportion to the hight of stalk, always being careful to select that which is sound and well ripened. By exercising care in this respect and in excluding the most imperfect grains on the cob when planting, a very considerable increase in the product may be secured, more than sufficient to repay the labor many times over, and this improvement may be continued; while, on the other hand, when the corn is selected from the crib, or not selected with any particular care, it as rapidly deteriorates. Select the seed corn before harvest and dry it well, and store it away against seeding time.

Jenny Lind Strawberry.—This is one of the earliest of our strawberries. It has not yet been extensively disseminated. It was originated a few years since in Massachusetts. We notice in our exchanges that it has received very favorable recommendations from all parts of the country. We should not be surprised if this variety entirely superseded the Early Scarlet as a market variety. It is one of the earliest varieties to ripen, is perfectly hardy, has withstood the severe drought in our grounds, as well as any variety we have in cultivation the present season, and is said to be very productive. The fruit coming into market early will make it command a high price. We expect to see a large demand for the Jenny Lind Strawberry. M. B. Batcham, one of the best pomologists of Ohio, thus speaks of it:

"This variety originated in Massachusetts a few years since, and has not yet become very generally diffused. It ripens with the Early Scarlet, is a larger and fairer fruit, of better flavor, the plants equally hardy and productive, and flowers staminate. We consider this variety more of an acquisition than the much praised Wilson's Albany."

"The Homestead."—The Louisville Editor of the "Valley Farmer," acknowledges his obligations to Mason C. Weld, Esq. publisher of the Connecticut "Homestead," for copies of that excellent periodical, in addition to the regular exchange to the St. Louis office. We esteem the favor more highly from the fact that the courtesy was cut off during the short period when the "Homestead" was under the management of a previous publisher.

The "Homestead" is among our most highly prized exchanges. It is just such a publication as every farmer in the Eastern States should have.

Tracy's School Records and Register.—Prof. Tracy is doing a great and good work for the educational interests of Missouri, not only by preaching the "Gospel of Common Schools," from county to county, helping the hopeful, encouraging the despondent, admonishing the indolent and apathetic, and thus infusing some degree of energy and vitality as well as method and order into the operations of our School system, but by the preparation of such school requisites and facilities as must prove of great value in the hands of every earnest and faithful teacher.

The School Records, of which there are two forms, the large and pocket size, are designed for daily use in keeping an account of the attendance, deportment, and scholarship of pupils. The mode recommended for keeping the record is so simple that the result is readily understood by pupils and parents, and we cannot conceive of a stronger incentive to diligence in study and circumspection of conduct than this record, when faithfully kept. The scholar's record, is a small, cheap book, prepared upon the same plan of the teachers, and designed for the use of each pupil who is old enough to keep it properly.

The school register is a kind of ledger, into which the results of the record are to be posted from month to month, and is of sufficient capacity to contain the condensed educational history, and show the exact standing of every pupil, in a seminary or district school, for a period of ten or twelve years. To make this more valuable to district schools, it contains 12 pages of blank forms for inserting the annual statistics of a district, also, nearly a hundred pages of blank paper for general memoranda, record of transactions, &c. These different school facilities are for sale by L. Bushnell & Co., A. Carr, St. Louis, and at the Missouri School Agency, Jefferson City.